SUB300/300B

Dolby Pro-Logic® Surround Processor/Amplifier/Subwoofer

SERVICE MANUAL

JBL Consumer Products Inc.
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1-800-336-4JBL in the USA

A Harman International Company

Rev A 11/99

The Sub300/300b are part of the ESC300 system. Subwoofers SUB300 and SUB300b can be easily identified by the label on the main control plate, either SUB300 or SUB300b.

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SPECIFICATIONS

PRODUCT: JBL ESC-300 Surround Processor/Amplifier

DESCRIPTION: 5x30w + 1x60w amp module

LINE VOLTAGE	Yes/No	Voltage	Nominal	
US 120vac/60Hz	Yes	120VAC	120VAC	
EU 230vac/50-60Hz	Yes	230VAC	230VAC	
Asia 100vac/50Hz	Yes	100VAC	100VAC	
Parameter	Spec.	Unit	Conditions	Notes
Amp Section: L,C,R,LS,RS				
Rated Output Power/ Prologic mode	30	Watts	Prologic Mode 1 Khz, 1 % THD: Load impedance 6 Ohms all channels	Prologic mode 1% THD, Input voltage 120VAC
THD@ Rated Power	0.08	%	22k filter Stereo mode	25W (Power Bandwidth 250Hz-20KHz)
THD @ 1 Watt	0.1	%	22k filter Stereo mode	
Rated Output Power/ STEREO MODE	30	Watts@1%THD	Stereo Mode Ma x @ 1 Khz	
DC Offset	50	mV-DC	@ Speaker Outputs	
Damping factor	>20	DF		30 Watts @ 1 Khz, 6 Ohms stereo mode
Input Sensitivity (L,C,R,LS,RS)				
Input Frequency	1k	Hz	Nominal Freq.	
Video Input L,R (Stereo mode)	360	mVrms	To Rated Power/ Vol @ Max stereo mode	AP Outputs Zo=600 Ohms
Video Input Central (Prologic mode)	260	mVrms	All controls nominal position	AP Outputs A&B Zo=600 Ohms
Video Input LS,RS (Prologic mode)	260	mVrms		AP Outputs A&-B Zo=600 Ohms
Signal to Noise (L,C,R,LS,RS)				
SNR-A-Weighted	80	dBA	Relative to Max output power/ AP Zo=600 Ohms	A-Weighting filter
SNR-unweighted	65	dBr	Relative to Max output power/ AP Zo=600 Ohms	22k filter
SNR rel. 1W-unweighted	55	dBr	Relative to 1W Output/ AP Zo=600 Ohms	22k filter
Residual Noise Floor	5	mVrms	Volume @max, using RMS reading DMM/VOM (or A/P BW=22 Khz.)	22k filter
Residual Noise Floor	5	mVrms(max)	Volume @max, w/ A/P Swept Bandpass Measurement (max V-RMS Line freq.+ harmonics)	22k filter
Filters/EQ (L,C,R,LS,RS)				
Treble Control: @ 10kHz	□8	dB	Relative to 0dBr at 1w output/6 ohms	
Bass Control: @ 200Hz	□6	dB	Relative to 0dBr at 1w output/6 ohms	
HPF stereo mode Left and Right channels	Fixed	dBr	0dBr = 1w @ 1kHz , HP -3dB point @ 100 Hz.	
Level Controls (L,C,R,LS,RS)				
Balance Control (Stereo Mode)	-30	dB	Attenuation-Relative to 0dBr at 1w output/6 ohms	
Rear Level Control (Surround Mode)	□20	dB	Relative to 0dBr at 1w output/6 ohms	
Center Level Control (Surround Mode)	□20	dB	Relative to 0dBr at 1w output/6 ohms	
Channel Separation at 1w, 1kHz				
Inputs AUX and Video in Stereo Mode	>50	dB	Separation @ 1w/6 ohms, 1kHz	Relative to FL and FR
Amp: 60w x 1 Subwoofer Section				
Load Impedance (speaker)	4	Ohms	Nominal	
Rated Output Power	60	Watts	200 Hz, 1 % THD	Surround mode simulated 200Hz crossover frequency.
THD@ Rated Power	0.08	%		60w (Power Bandwidth 30-250Hz)
THD @ 1 Watt	0.1	%	22k filter	
Output Power at 1% THD+N	65	Watts@1%THD	2 ch. Stereo Mode @ 40 Hz	
DC Offset	50	mV-DC	@ Speaker Outputs	

Damping factor	>60	DF	—	40 Hz test stereo mode @ 60 Watts output power
Input Sensitivity				
Input Frequency	40	Hz	Nominal Freq.	Stereo Mode Zo=600 Ohms
Video IN & Aux IN	200	mVrms	To rated power Volume control @max,(Stereo mode) all other controls at nominal position.	Stereo Mode Zo=600 Ohms
Signal to Noise				
SNR-A-Weighted	90	dBA	Relative to Full power (60 Watts).	A-Weighting filter
SNR-unweighted	65	dBr	Relative to Full power (60 Watts).	22k filter
SNR rel. 1W-unweighted	60	dBr	Relative to 1W Output/ 1k ohm term.	22k filter
Residual Noise Floor	6	mVrms	Volume @max, using RMS reading DMM/VOM (or A/P)	
Residual Noise Floor	6	mVrms(max)	Volume @max, w/ A/P Swept Bandpass Measurement (max V-RMS Line freq.+ harmonics)	
Filters/EQ				
Bass Control: Boost @ 40Hz	□8	dB	Relative to 0dBr at 1w output/4 ohms	
Bass Control: Cut @ 40Hz	□8	dB	Relative to 0dBr at 1w output/4 ohms	
LPF Stereo mode	Fixed		0dBr = 1w @ 40Hz , LP -3dB point @ 250 Hz.	
Power on Delay time				
	3	sec.	AC Power Applied	
Efficiency				
Quiescent Input Power	30	Watts	@ nom. line voltage	Nominal input voltage Nominal Input ferqeuncy and voltage.
Power Cons.@ rated power	400	Watts	@ nom. line voltage	Maximum input power consumption has been rated by UL to 650Watts .
Protection				
Short Circuit Protection	yes		Direct short at output	During short circuit condition unit will automatically change its operating mode to Stand-by (AC reset required to restart). Input power should not exceed Stand-by input power.
Thermal Protection	yes		@1/8 max unclipped Power	
Line Fuse Rating				
Asia & US versions	6A	Amps	Fast blow fuse	Removable on rear panel 5x20mm 125VAC version
European version (EU)	4A	Amps	Slo-Blo	Removable on rear panel 5x20mm 230VAC version

PRODUCT:	JBL ESC-300 Surround Processor/Amplifier
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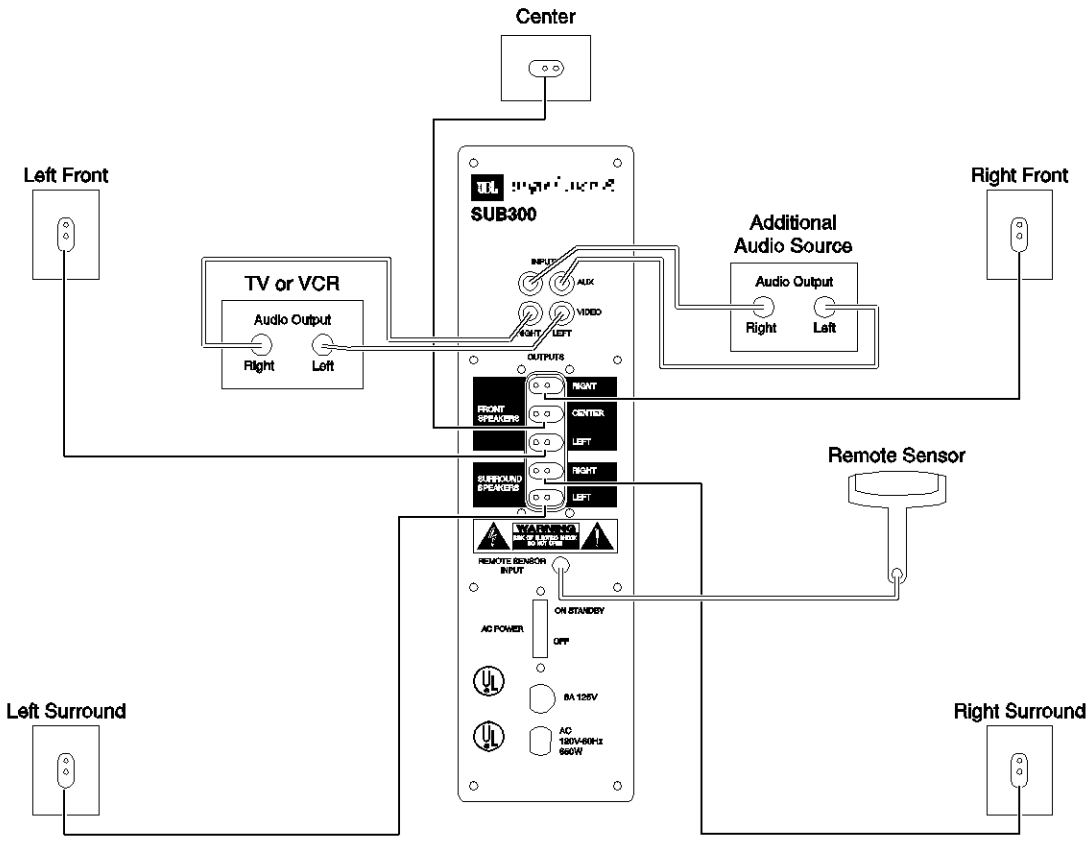
LINE VOLTAGE	Yes/No	Voltage	Nominal	
US 120vac/60Hz	Yes	120VAC	120VAC	
EU 230vac/50-60Hz	Yes	230VAC	230VAC	

SUB300/SUB300B SPEAKER AND SOURCE CONNECTIONS



CONTROLS AND THEIR FUNCTION

Remote Control

1. Mute From either the front panel or the remote control; press (Mute) to lower the volume completely. The mute symbol indicator (27) will begin to flash. When you press either of the mute buttons again, the volume will return to its previous setting. Note: The mute function can also be turned off by pressing either of the volume buttons on the front panel or the remote control,

2. 0dB Press this button to reset the Center, Surround, Balance, Treble and Bass controls to their default positions.

3. Test Press this button to activate the Test Tone mode (see "Test Tone" section).

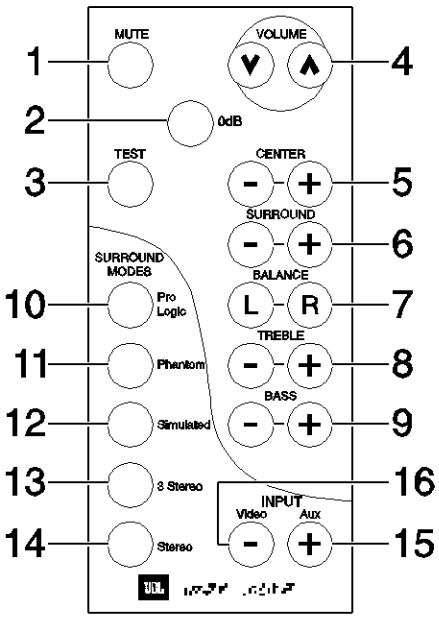
4. Volume Press (▲) on the remote control to raise the system's volume. Press (▼) on the remote control or front panel to lower the system's volume.

5. Center Press (+) on the remote control to increase the relative volume of the center channel. Press (-) on the remote control to decrease the relative volume of the center channel.

6. Surround Press (+) on the remote control to increase the relative volume of the surround channels. Press (-) on the remote control to decrease the relative volume of the surround channels.

7. Balance Press (R) on the remote control to decrease the volume of the left channel. Press (L) on the remote control to decrease the volume of the right channel.

8. Treble Press (+) to increase the level of high-frequency information. Press (-) to decrease the level of high-frequency information.



9. Bass Press (+) to increase the level of high-frequency information. Press (-) to decrease the level of low-frequency information.

10-14. Surround Modes From the remote, press one of these buttons to directly choose the desired surround mode (see "Surround Modes" section). From the front panel, press (**Surround Mode**) to cycle between the surround modes.

15-16. Input Selector From the remote, press either (**Aux**) or (**Video**) to select the desired input. From the front panel, press (**Input**) to select the desired input.

Front Panel Indicators

17-18. Input Either Video or Aux will illuminate, depending on which input is chosen.

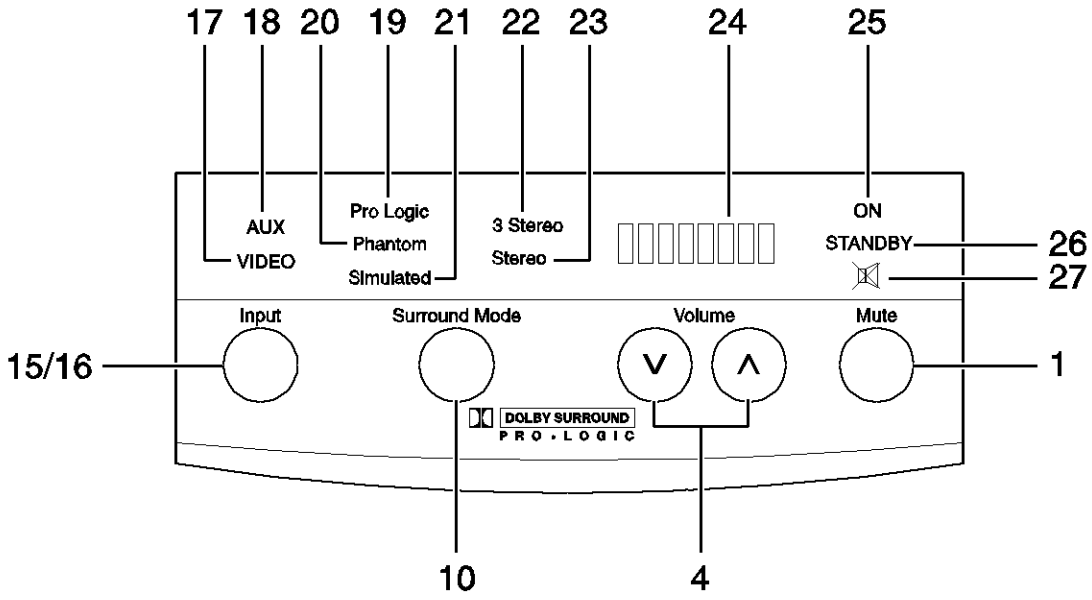
19-23. Surround One of these will illuminate depending on which surround mode is chosen.

24. Status Bar Indicators These LEDs show the relative setting of volume, balance, center level, surround level, bass and treble controls.

25. On This will illuminate when the Master On/Off is switched to On/Standby and a signal is present.

26. Standby This will illuminate when the Master On/Off is switched to On/Standby and a signal is ***not*** present.

27. Mute Symbol This will flash whenever the Mute feature is engaged.



Surround Modes

Dolby Pro Logic
Use this mode for films recorded using Dolby Pro Logic Surround. The Surround channels have a 20-ms delay.

Phantom
This mode creates surround sound from stereo recordings. The center channel is not used and the surround channels have a 20-ms delay.

Simulated
This mode provides surround sound with no delay for the surround speakers. This is not a Dolby Mode.

3-Stereo Mode
Use this mode to play back Pro Logic-encoded films when you do not want the surround channels to play.

Stereo
This mode plays a recording in traditional two-channel stereo.

Test Tone

The test tone is used to calibrate the volume settings of the speakers. A static noise will be heard cycling, in order, from the front left, center, right, and both surround speakers.

Using the remote control, adjust the Center and Surround levels until the volume of all the speakers is the same during the test.

NOTE: The test tone is used to calibrate the performance of the system. When listening to an actual recording, the volume level of the surround channels is generally much lower than that of the front channels. In fact, when listening to a movie, virtually all of the dialogue and a substantial amount of the effects are reproduced through the center channel.

SUB 300/300B DISASSEMBLY PROCEDURE

1) Unplug all external cables; lay the subwoofer on a padded surface so that plastic cabinet base is facing upwards.

2) Remove (4) oblong rubber feet from cabinet base, exposing the (4) recessed screws holding the base on.

3) Remove the (4) screws; remove the cabinet base.

4) Remove the (8) woofer mounting screws and remove the woofer; unplug the main speaker wires from the terminals.

5) In the woofer opening, cut all plastic cable ties holding the bundled wires together.

6) Identify the (5) two-conductor molex connectors from the Pro Logic board mounted on the inside of the cabinet that must be removed. Use the map on the following page to identify. Observe the wire colors on each connector, and write each connector and it's corresponding wire color either in this manual, or on a separate piece of paper. This is important to avoid mixing up the connectors upon reassembly.

7) Unplug the (5) two-conductor molex connectors from the Pro Logic board.

NOTE: These molex connectors may be glued together, or glued to the PCB; utmost care is required to unplug them without damaging nearby components or the connectors themselves. We recommend using a heat gun or blow dryer at moderate temperature to warm the adhesive first on each connector, and then unplug using long-nosed pliers.

8) Remove the (10) ¾" machine screws holding the heatsink in place; remove only the screws on the outer perimeter

9) Remove both the heatsink (with power supply and main amplifiers) out of the cabinet; unplug additional connectors as necessary.

10) Normally the input/output plate (with power cord & switch) will not have to be removed; however, if necessary for the repair:
   a) Remove the (8) ¾" machine screws holding the input/output plate on the cabinet.
   b) Remove the plate; use caution because one of the 3 conductor cables connecting to the Pro Logic board is very short; unplug it from its molex connector. Unplug all other connectors as needed.

11) If complete removal is desired of the both the amplifier and the input/output plate, the main 2 conductor power wires will have to be separated (cut) or the wire nuts removed near the power transformer.

REASSEMBLY

Use a backwards sequence from the above steps; some additional notes include:

1) If the input/output plate was removed, make sure the speaker wires exiting the plastic cover are still air-tight; seal with additional hot glue or silicon seal if necessary.

2) Make sure all connectors, molex, power cord, and woofer wires, are attached and plugged in their original locations. Refer to your notes regarding the wire colors for the final (5) two-conductor molex connectors to the Pro Logic board. These connectors do not need to be re-glued.

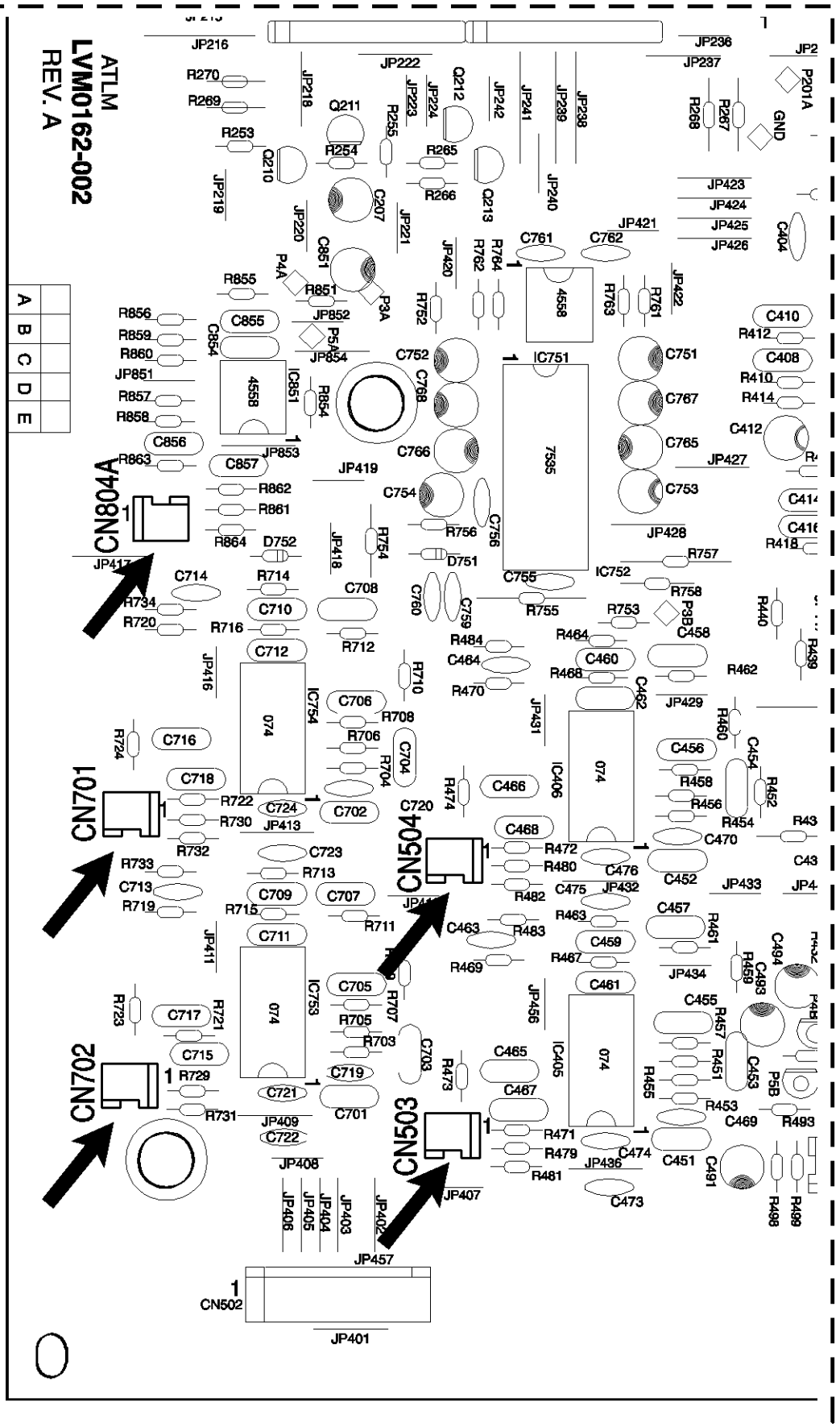
3) Replace plastic cable ties as necessary.

4) Replace the woofer. SUB300 - Observe polarity on woofer wires - red wire to red dot on woofer.

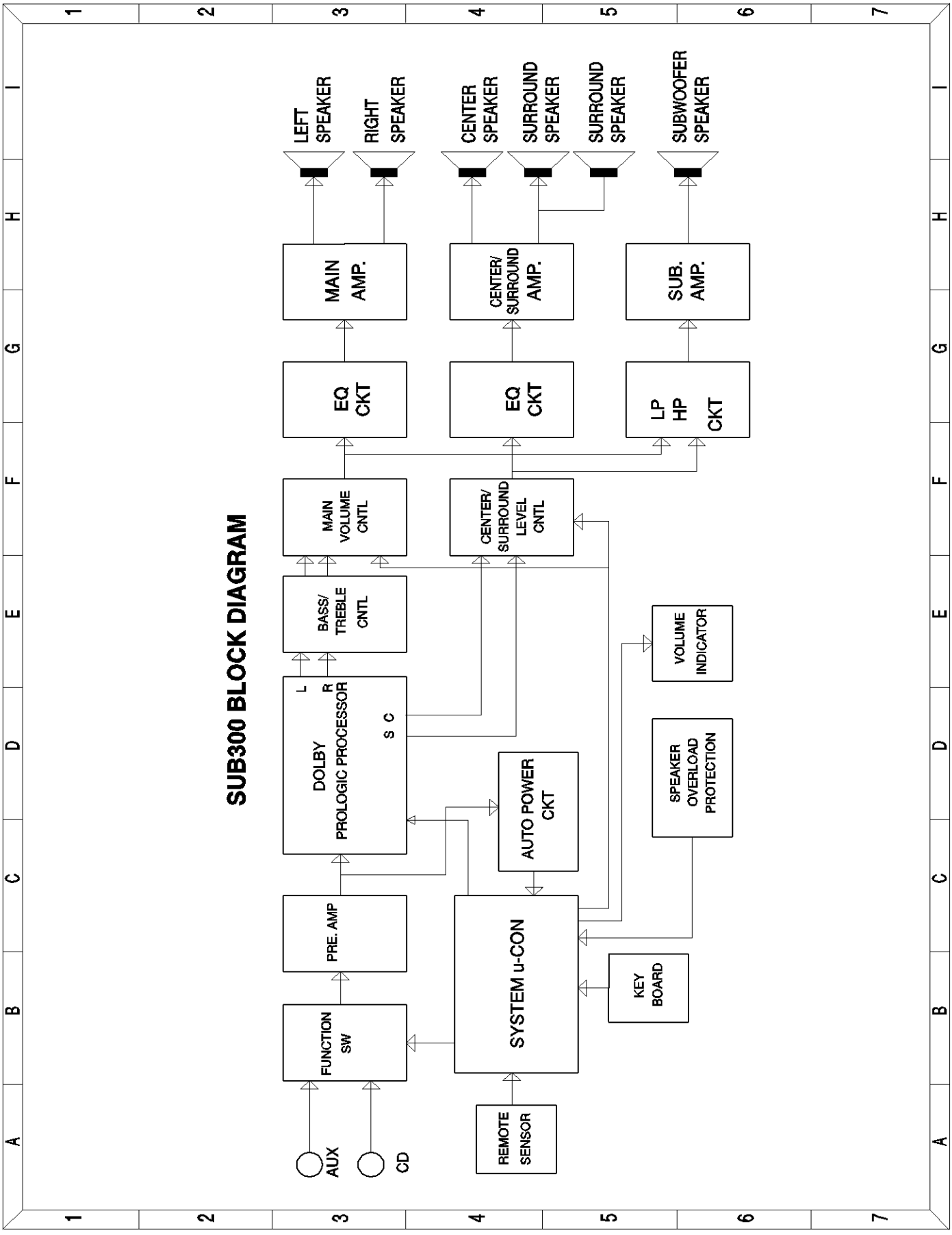
5) Last step is to re-fit plastic base to cabinet, reattach with screws, re-fit rubber plugs.

DOLBY PRO LOGIC PCB CONNECTORS

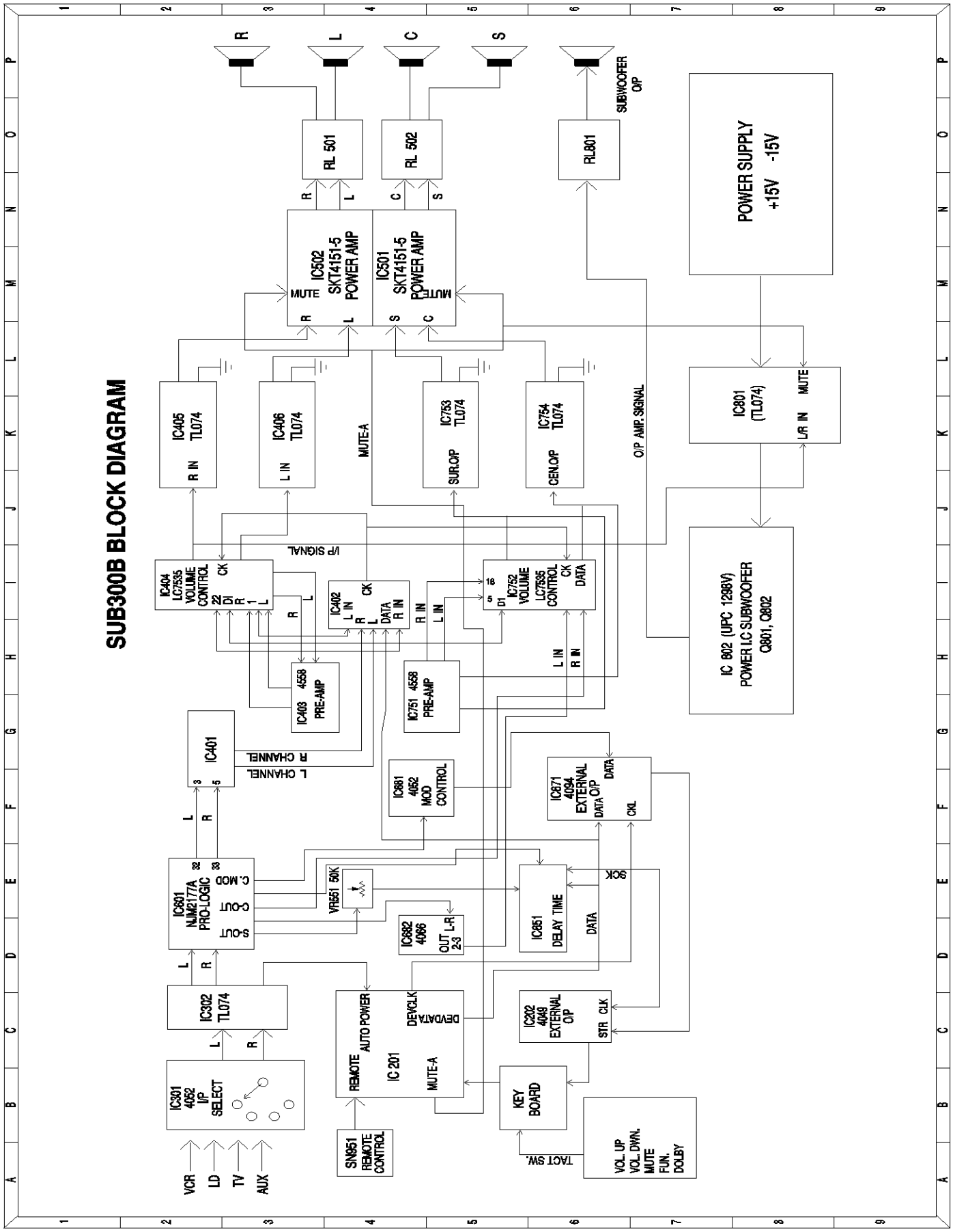
Dolby Pro Logic PCB Connectors



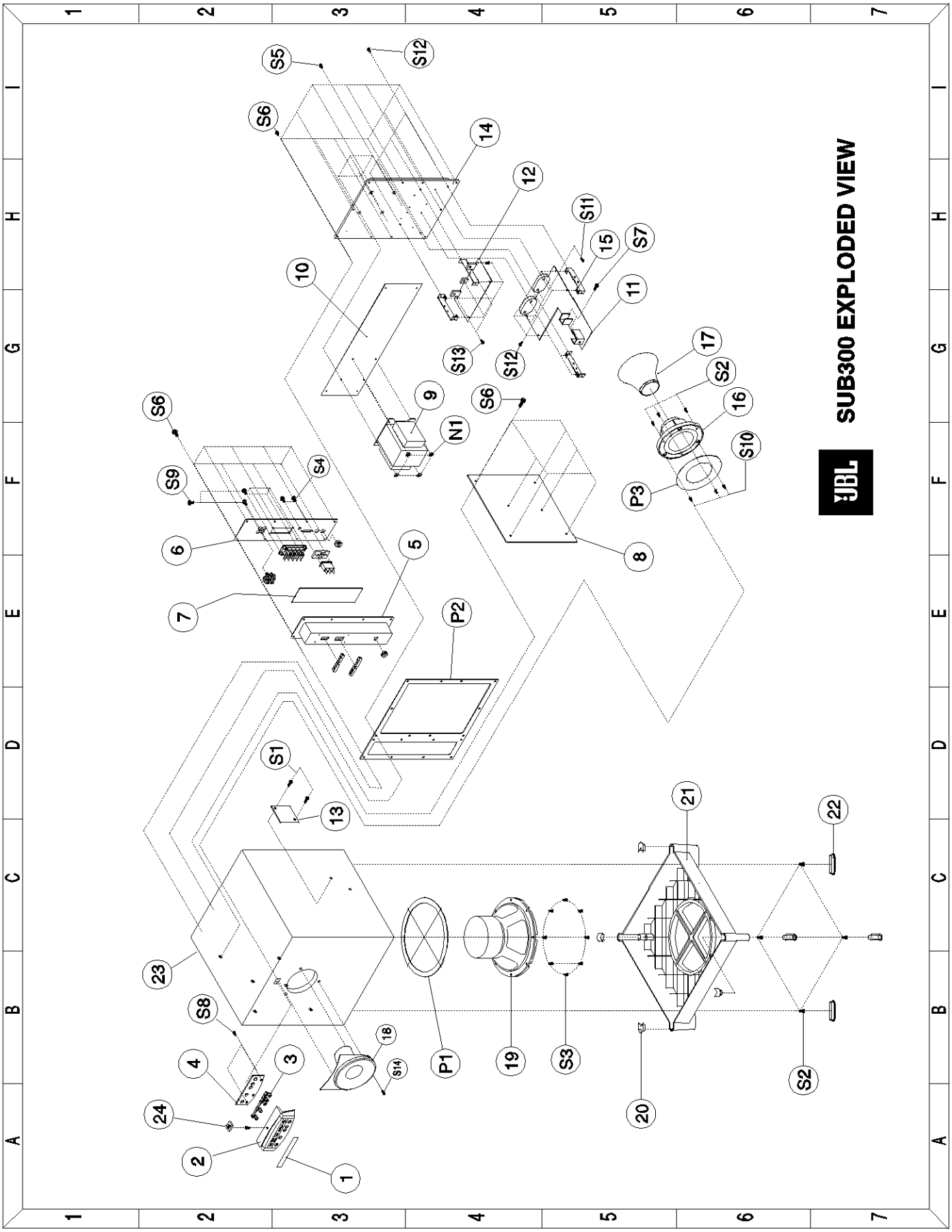
SUB300 BLOCK DIAGRAM



SUB300B BLOCK DIAGRAM



SUB300 UNIT EXPLODED VIEW

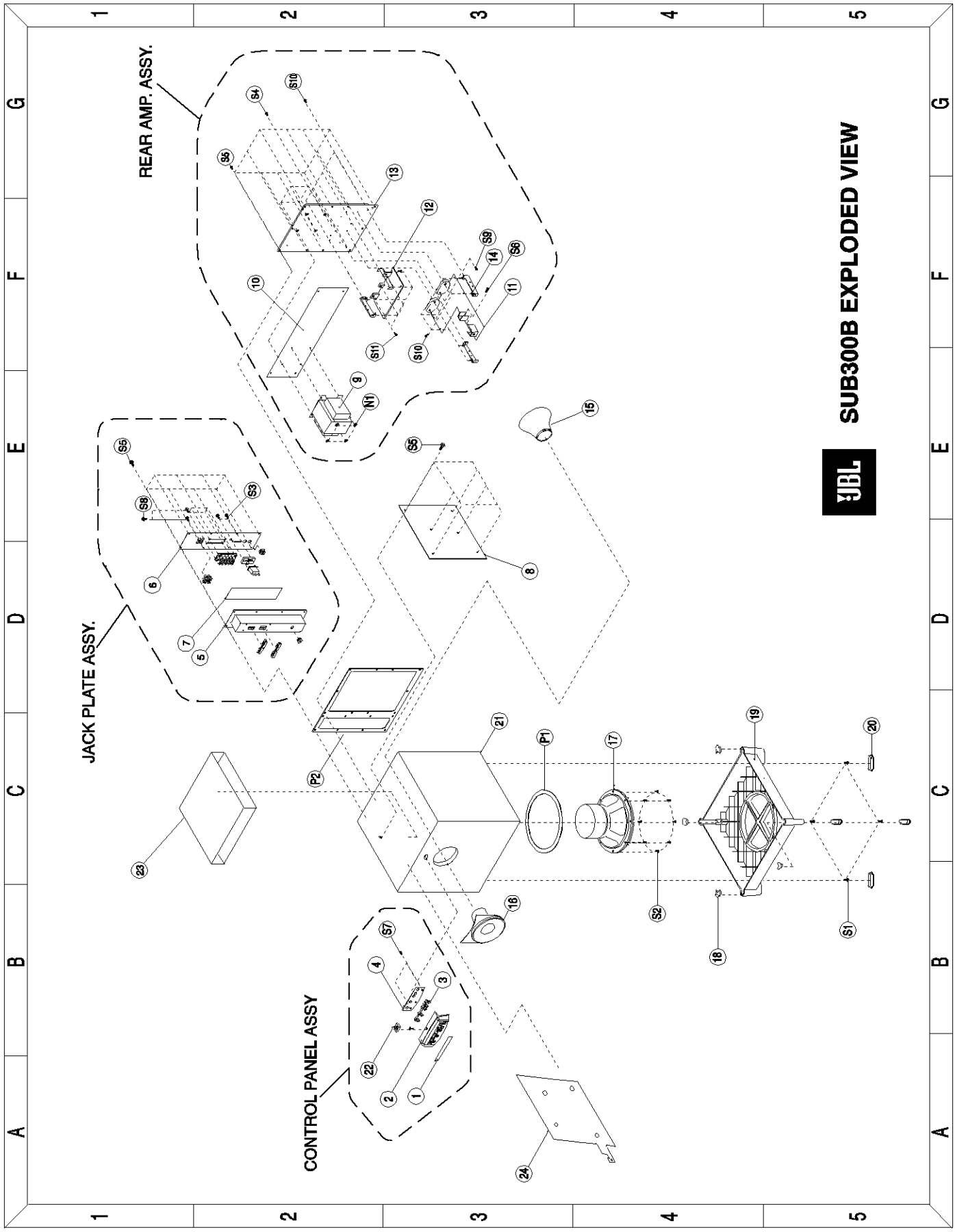


SUB300 MECHANICAL PARTS LIST

Ref.#	Part Number	Description	Qty.
1	BNP0027-001	PVC PLATE PVC	1
2	BPF5033-001	CONTROL PANEL, BLACK	1
	BPF5033-002	CONTROL PANEL, WHITE	1
3	BPK5031-000	PUSHBUTTON PANEL	1
4	APE0161-C31	CONTROL PCB ASSY	1
5	BPA0021-000	REAR COVER HI-PS	1
6	GSE0139-003	JACK PLATE 100V	1
	GSE0139-001	JACK PLATE 120V	1
	GSE0139-002	JACK PLATE 230V	1
7	APE0163-C0I	JACK PCB ASSY	1
8	APE0162-C0I	MAIN PCB ASSY	1
9	TTK1000-002	TRANSFORMER 100V	1
	TTK1200-005	TRANSFORMER 120V	1
	TTK2300-003	TRANSFORMER 230V	1
10	BNP0035-001	TRANSFORMER. PLATE L420xW120mm UL	1
11	APE0161-C11	AMP PCB ASSEMBLY	1
12	APE0161-C21	SUB WOOFER PCB ASSY	1
13	APE0162-C11	CENTER PCB ASSY	1
14	GAL0055-001	HEAT SINK AL	1
15	GSE0144000	BRACKET SECC	1
16	BPR0021-001	PORT ABS	1
17	BPR0020-000	PORT EDGE ABS, BLACK	1
	BPR0020-001	PORT EDGE ABS, WHITE	
18	BPR001 9-000	PORT TUBE, BLACK	1
	BPR001 9-001	PORT TUBE, WHITE	1
19	FTW6080-311	SPKR DRIVER 8" 4	1
20	BRF0015-001	RUBBER PAD, BLACK	4
	BRF0015-002	RUBBER PAD, WHITE	4
21	BPB0012-001	BOTTOM CAB	1
22	BRF0014-001	RUBBER PAD, BLACK	4
	BRF0014-002	RUBBER PAD, WHITE	4
23	EVM0011-001	CABINET W330xH330xD330mm	
24	BPL0013-001	LOGO PLATE N1	1
	H141482	NUT @14x3.5mm	1

Ref.#	Part Number	Description	Qty
P1	IVE0041-001	DRIVER GASKET 184x210x2Tmm	1
P2	IVE0042001	BOX GASKET 2Tmm	1
P3	IVE0043-001	PORT GASKET 75x131x1.0mm	1
S1	H010301-116	SCREW T3.0xL16.0mm	2
S2	H016504-316	SCREW W6#-20xL16.0mm	5
S3	H016701-316	SCREW W8#-I 8xL16.0mm	8
S4	H060301-314	SCREW M3.0xL14.0xP0.5mm	2
S5	H060404-321	SCREW M3.5xL21mm	4
S6	H060501-320	SCREW M4x0.7PxL20.0mm	24
S7	H100301-306	SCREW TAPPING 3.0 x 6	
S8	H101001-108	SCREW T3.0xL8.0 mm	3
S9	H101001-310	SCREW T3.0xL10.0mm	5
S10	H101002-110	SCREW T3.0xL10.0mm NICKEL	3
S11	H120301-308	SCREW M2x0.5PX8mm	8
S12	H120301-314	SCREW M3x0.5Px14mm	8
S13	H120302-308	SCREW M3.0xL8.0xP0.5mm	2
S14	H016502-316	SCREW W6#20xL16mm	3
	47455-056	LINE CORD 100V *(NOT SHOWN)*	1
	47455-052	LINE CORD 120V *(NOT SHOWN)*	1
	2559-022122	LINE CORD 230V *(NOT SHOWN)*	1

SUB300B UNIT EXPLODED VIEW



SUB300B / 230 MECHANICAL PARTS LIST

Ref.#	Part Number	Description	Qty.
1	BNP0027-001	PVC PLATE	1
2	BPF5033-001	CNTL PANEL1	1
3	BPK5031-000	CNTL KNOB	1
4	APE0161-C32	CONTROL PCB ASSY	1
5	BPA0021-000	REAR COVER	1
6	GSE0139-007	JACK PLATE SECC 230V	1
7	APE0163-C01	JACK PCB ASSY	1
8	APE0162-C03	MAIN PCB ASSY	1
9	TTK2300-003	PWR TRANS 230V 50W EI-96	1
10	BNP0035-001	X'MER PLT L420xW120 mm UL	1
11	APE0161-C12	AUDIO/AMP PCB ASSEMBLY	1
12	APE0161-C22	SUBWOOFER PCB ASSEMBLY	1
13	GAL0055-002	HEAT SINK ALUMINUM	1
14	GSE0140-000	BRACKET PCB BRACKET SECC	1
15	BPR0020-000	PORT EDGE HI-PS W/O SPRAY BLK	1
16	BPR0042-BA0	PORT HI-PS (DP6P1083)	1
17	FTW6080-312	SPK DRIVER "8"" 4 OHM 60W"	1
18	BRF0015-001	RUBBER PAD	4
19	BPB0012-001	BOTTOM CAB	1
20	BRF0014-001	RUBBER PAD	4
21	EVM0011-003	WOOD BOX W330xH330xD330 mm	1
22	BPL0013-001	LOGO PLATE L22.5xW18.0 mm	1
23	DAB3030-601	FIB SHEET L300.0xW300.0 xH60.0 mm YELLOW	1
24	GTN0043-002	TIN FOIL	1
N1	HNI1482	NUT @14x3.5 mm	4
P1	IVE0041-001	DRIVER SPONGE OD210.0 xID184.0xT1.0 mm BLACK	1
P2	IVE0042-001	BOX SPONGE 2Tmm	1
S1	H016504-316	SCREW W6#-20xL16.0mm WAFER HEAD BLK	4
S2	H016701-316	SCREW W8#-18xL16.0mm PAN HEAD BLK	8
S3	H060301-314	SCREW M3.0x0.5pxL14.0mm BLACK	4
S4	H060404-321	SCREW M3.5x0.6pxL21.0mm WAFER BLK	4
S5	H060501-320	SCREW M4.0x0.7pxL20.0mm PAN HEAD BLK	10
S6	H100301-306	SCREW T3.0xL6.0mm BLACK	1
S7	H101001-108	SCREW T3.0x1.27p-2RH xL8.0mm NICKEL	2
S8	H101001-310	SCREW T3.0x1.27p-2RH xL10.0mm BLACK	1
S9	H120301-308	SCREW T3.0x0.5pxL8.0mm PAN HEAD BLK	1
S10	H120301-314	SCREW T3.0x0.5pxL14.0mm PAN HEAD BLK	4
S11	H120302-308	SCREW T3.0x0.5pxL8.0mm W/WASHER BLK	5

SUB300 ELECTRICAL PARTS LIST

Capacitors

Ref.#	Part #	Description	Qty.
C201	PVE3950-102	COND ELECT, 1000 uF 6.3V 20%	1
C202, 321, 322, 323 323, 324, 333, 334, 335, 336, 401, 402, 405, 406, 435, 436, 439, 440, 661, 675, 751, 752, 767, 768	PRE3955-109	COND ELECT, 1 UF 50V 20%	24
C203, 204	PRD1335-180	COND DISC, 18 PF 50V 5% NPO D=5	2
C205, 209, 210, 310, 312, 317, 318, 329, 329, 331, 417, 418, 431, 432, 441, 442, 445, 473, 474, 475, 476, 667, 682, 721, 722, 723, 724, 755, 756, 759, 760, 761, 762, 913, 914, 921, 922, 923, 924, 929, 930	PRD3965-104	COND DISC, 0.1 uF 50V +80-20% Y5VIZ5V	41
C206	PRE3955-478	COND ELECT, 0.47 uF 50V 20%	1
C207, 411, 412, 533 671, 672, 690	PRE3952-100	COND ELECT, 10 uF 16V 20%	7
C208, 655, 941	PRE3951-470	COND ELECT, 47 uF I0V 20%	3
C305, 306, 307, 308, 814	PRD3545-101	COND DISC, 100 pF 50V 10% Y5P	5
C311, 313, 319, 320, 332, 419, 420	PRE3953-470	COND ELECT, 47 uF 25V 20%	7
C325, 326, 327, 328	PRD1335-470	COND DISC, 47 pF 50V 5% NPO	4
C330	PRD1335-100	COND DISC, 10 pF 50V 5% NP0	1
C403, 404	PRD8035-270 SL D=5	COND DISC, 27 pF 50V 5% 1	2
C407, 408, 654, 658, 805, 811	PRM3737-683	COND MYLAR, 0.068 uF 100V 5%	6
C409, 410, 806	PRM3737-123	COND MYLAR, 0.012 uF 100V 5%	3
C413, 414	PRM3737-272	COND MYLAR, 0.0027 uF 100V 5%	2
C415, 416 631, 632	PRI43737-223	COND MYLAR, 0.022 uF 100V 5%	4
C433, 434, 437, 438, 663, 674, 753, 754, 765, 766, 851, 942	PRE3955-479	COND ELECT, 4.7 uF 50V 20%	12
C451, 452, 701, 702	PRI43737-392	COND MYLAR, 0.0039 uF 100V 5%	4
C453, 454, 455, 456, 703, 704, 705, 706	PRI43737-273	COND MYLAR, 0.027 uF 100V 5%	8
C457, 458, 459, 460, 707, 708, 709, 710	PRN3737-102	COND MYLAR, 0.001 uF 100V 5%	8
C461, 462, 711, 712	PRM3737-182	COND MYLAR, 0.0018 uF 100V 5%	4
C463, 464, 713, 714	PRD3545-201	COND DISC, 200 pF 50V 10% Y5P	4
C465, 466, 467, 468, 604, 607, 715, 716, 717, 718	PRM3737-472	COND MYLAR, .0047 uF 100V 5%	10
C469, 470, 719, 720	PRD3545-681	COND DISC, 680 pF 50V 10% Y5P	4
C493, 494, 512, 532	PRE3955-100	COND ELECT, 10 UF 50V 20%	4
C501, 502, 521, 522, 810	PRD3545-102	COND DISC, 1000 pF 50V 10% Y5P	5
C503, 504, 523, 524	PRE3955-109	COND ELECT, 1 uF 50V 20%	4
C505, 506, 511, 525, 526, 531	PRE3954-101	COND ELECT, 100 uF 35V 20%	6
C507, 508, 527, 528	PRE3955-470	COND ELECT, 47 uF 50V 20%	4
C509, 510, 529, 530, 822, 823, 918, 920	PRM3745-104	COND MYLAR, 0.1 uF 50V 10%	8
C515, 516, 535, 536	PRD3545-221	COND DISC, 220 pF 50V 10% 11 Y5P D=5	4
C541, 601, 602, 603, 612, 613, 617, 618, 619, 642, 925	PRE3951-100	COND ELECT, 10 uF 10V 20%	11
C605, 641	PRE3942-220	COND ELECT, 22 uF 16V 10%	2
C606, 611, 652, 662	PRM3737-562	COND MYLAR, .0056 uF 100V 5%	4
C608	PRD3545-471	COND DISC, 470 pF 50V 10% 11 Y5P D=5	1
C609	PRE3951-221	COND ELECT, 220 uF 10V 20%	1
C610, 639, 640 830, 831, 832, 833	PRM3737-473	COND MYLAR, 0.047 uF 100V 5%	7
C614, 621, 622, 623, 626	PVM3737-224	COND MYLAR 0.22 uF 100V 5%	5
C615	PRE3942-100	COND ELECT, 10 uF 16V 10%	1
C616, 666, 670, 681	PRE3953-101	COND ELECT, 100 uF 25V 20%	4
C620	PVP2637-684	COND METAL 0.68 uF 100V 5%	1
C624, 625	PRE3951-479	COND ELECT, 4.7 uF 10V 20%	2
C627, 628, 629, 630, 633, 634, 635, 636, 656, 657, 803, 804	PRK3737-104	COND MYLAR, 0.1 uF I00V 5%	12
C637, 638	PVP3935-681	COND POLY 680 pF 50V 5%	2
C653, 660	PRD3545-561	COND DISC, 560 pF 50V 10% 11 Y5P D=5	2
C659	PRD3545-562	COND DISC, 5600 pF 50V 10% Y5P	1
C664, 665	PRD1335-300	COND DISC, 30 pF 50V 5% APO T.C.	2
C673, 813	PRE3951-101	COND ELECT, 100 uF 10V 20%	2
C683	PRD4965-223	COND DISC, .022 uF 50V +80-20% 11 Z5V	1
C801, 802	PRD3965-104	COND DISC, 0.1 uF 50V +80-20% Y5V/Z5V	2
C807	PRM3737-563	COND MYLAR, 0.056 uF 100V 5%	1
C808	PRE3955-229	COND ELECT, 2.2 uF 50V 20%	1
C809	PRD1335-150	COND DISC, 15 pF 50V 5% NP0	1
C812	PRM3737-393	COND MYLAR, 0.039 uF 100V 5%	1
C814	PRD3545-101	COND DISC, 100 pF 50V 10% Y5P	1
C820, C821	PVE3955-332	COND ELECT, 3300 uF 50V 20%	2
C822, 823	PRM3745-104	COND MYLAR, 0.1 uF 50V 10%	2

SUB300 ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
C854, 855	PRM3737-183	COND MYLAR, 0.018 uF 100V 5%	2
C856	PRM3737-303	COND MYLAR, 0.03 uF 100V 5%	1
C903, 904, 905, 906, 907, 908, 909, 910	PRD4965-203	COND DISC, .02 uF 50V +80-20% 11 75Z D=7	8
C915, 916	PVE3954-222	COND ELECT, 2200 uF 35V 20%	2
C917, 919	PVE3955-332	COND ELECT, 3300 uF 50V 20%	2
C927	PRE3953-100	COND ELECT, 10 uF 25V 20%	1
C931	PRE3953-220	COND ELECT, 22 uF 25V 20%	1
Connectors			
CN201, CN202	CCN7879-029	CONNECTOR, J.S.T. 2.0mm PH 898-PH-K TOP SIZE	2
CN203	CCN7879-027	CONNECTOR, J.S.T. 2.0mm PH B7B-PH-K TOP SIZE	1
CN204, CN303, CN304, CN505	CCN1500-023	CONNECTOR, B3B-XH-A 3 PIN POST BASE TOP	4
CN501	CCN3962-008	CONNECTOR, 8 PIN CL3962WVO PITCH=3.96 mm	1
CN502	CCN1500-033	CONNECTOR, 898-XH-A 9 PIN POST BASE TOP	1
CN503, CN504, CN701, CN702, CN804A	CCN1500-018	CONNECTOR, 828-XH-A 2 PIN POST BASE TOP	5
CN801	CCN1500-024	CONNECTOR, B68-XH-A 6 PIN POST BASE TOP	1
CN802 TO SPK	VWT1112-025	WIRE TERM, 250 mm WIRE AY TERMINAL LFTH205FOCO	1
CN803	CCN3962-003	CONNECTOR, 3 PIN CL3962WVO	1
CN901	CCN3962-006	CONNECTOR, 6 PIN CL3962WVO	1
Diodes			
D201, 202, 207, 241, 287, 288, 301, 401, 402, 503, 504, 505, 506, 507, 508, 509, 510, 651, 652, 671, 680, 691, 751, 752, 802, 803, 804, 805, 806	RAD4148-001	DIODE SW, IN4148	29
D501, 801, 903, 904, 905, 906, 915	RAD4001-001	RECTIFIER, IN4001 1A 35VRMS	7
D801, 810, 811, 812, 813, 907, 908, 909, 910	RHD5401-001	RECTIFIER, IN5401 3.0 A 70 V	9
ZD301, 302	RAZ0859-070	DIODE ZENR, 5.6-5.9V .5W HITACHI HZ68-2	2
ZD401, 402	RAZO859-OTT	DIODE ZENR, 9.1-9.5V .5W HITACHI HZ9C-2	2
ZD681	RAZ0859-068	DIODE ZENR, 5.0-5.2V .5W HITACHI HZ5C-2	1
ZD941	RAZ0859-071	DIODE ZENR 6.0-6.3V .5W HITACHI HZ6C-2	1
Fuses			
F801, F802	KSA2315-001	FUSE 3.15A 250V SLOW BEL 5x20mm VDE/CSA/UL	2
F902, F903	KSA2100-002	FUSE 1A 250V 5x20 mm W/UL. CSA. T MARKING	2
100V FUSE	KSA1600-001	FUSE 6A 250V 5x20 mm W/UL.	1
120V FUSE	KSA1600-001	FUSE 6A 250V 5x20 mm W/UL.	1
230V FUSE	KSA2400-001	FUSE 3A 250V 5x20 mm W/UL.	1
Integrated Circuits			
IC201	RH14740-021	IC 42 PIN, TMP47CH400 TOSHIBA MICROPROCESSOR	1
IC202, IC671	RH14094-001	IC 16 PIN, TC4094BP TOSHIBA 8 BIT SHIFT REGISTER	2
IC301, IC681	RH14052-001	IC 16 PIN, TC4052BP DIP 4 CH MULTIPLEXER	2
IC302, IC405, IC406, IC753, IC754	RHI0740-001	IC 14 PIN, TLO74CN QUAD OP-AMP	5
IC401, IC403, IC751, IC801, IC851	RH14558-001	IC 8 PIN, JRC4558D JRC OP AMP	5
IC402	RH19184-001	IC 16 PIN, TC9184 BASS/TREBLE CNTL	1
IC404, IC752	RHIT535-001	IC 22 PIN, LC7535 ELECTRONIC VOLUME CONTROL	2
IC501, IC502	RH14151-001	18 PIN,STK4151MK5 SANYO 2CH 30W 0.08% DIS POWER AMP	2
IC601	RH12177-001	IC 56 PIN, NJM2177A DOLBY PRO LOGIC SOUND DECODER	1
IC651	RH19702-001	IC 24 PIN, NJU9702D JRC DELAY IC	1
IC682	RH14066-001	IC 14 PIN, MC140668CP QUAD SW/MULTIPLEXER	1
IC802	RHI1298-001	IC 14 PIN, uPC1298V NEC 50-80W POWER AMP DRV	1
IC901	RHI7815-001	3 PIN, REGULATOR +15V 1A 7815	1
IC902	RHI7806-001	3 PIN, MC7806ACT (5V2)	1
IC903	RHI7915-001	3 PIN, 7915 -9V REGULATOR	1
Miscellaneous			
CR201	JQC6071-419	CRYSTAL, 4.194304 MHZ HC-49/UL=5.0 mm	1
F801, 802	CFC2557-001	FUSE CLIP , 5 D 5 X 20FUSE	4
F902, 903	CFC2557-001	FUSE CLIP , 5 D 5 X 20FUSE	4
JK201	CJM9380-028	PHONE JACK, JYE TAI 3542-01-0303.5 DIM	1
JK302	CJR6504-002	JACK RCA, 4P RJ-1073-10-0300A JYE TAI RED/WHITE	1
JK501	CTMOO05-001	TERMINAL, JACK ASSY MOLEX TYPE	1
L202	SHC7414-100	CHOKE, 10 UN	1
L501, 502, 503, 504	SHR6619-001	RF COIL, 1 uH	4
L801	SHR6619-001	RF COIL, I uH	1
LD201-208, 210A, 2108, 210C, 211A, 211B, 212A, 212B, 212C, 213A, 213B, 214A, 2148, 215A,	KEGO052-002	LED, 2X5 mm 523VGD-AA GREEN HIGH LIGHT	26

SUB300 ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
215B, 216A, 2168, 216C, 219			
LD217A, 217B, 218A 218B, 218C	KEG0052-003	LED, 2x5 mm 5231D/LD-A RED HIGH LIGHT	5
ON HEAT SINK-2	H100301-306	SCREW, TAPPING 3.0 x 6 BLACK	2
ON IC901	GAL0010-001	HEAT SINK, TOHEI 7 CD	1
ON IC902	GAL0007-001	HEAT SINK, USE MKH-610	1
PCL201	SHC7414-100	CHOKE, 10 UN	1
RL501, RL502	MRL2212-002	RELAY, MI-SH-212LM 12V DC 44 MA GOOD SKY	2
RL801	MRL2212-005	RELAY, SHINMEI RPA-12 V DC 10A(AC)250V	1
XL601	JRN6078-200	RESONATOR, 2 MHz	1
	APE0162-C11	Sub300 Loaded Audio Amp PCB	1
	APE0161-C11	Sub300 Power Amplifier PCB	1

Transistors

Q201, 202, 203, 204, 206, 208, 209, 210, 505, 672, 681, 906	RAP0733-001	XISTR PNP, 2SA733Q,P NEC	12
Q205, 207, 211, 212, 213, 214, 215, 216, 301, 302, 491, 492, 501, 502, 503, 504, 507, 508, 509, 510, 513,, 514, 533, 534 671, 673, 674, 804, 806, 818, 902, 904, 905, 908	RAN0945-001	XISTR NPN, 2SC945P NEC	34
Q511, 805, 941	RAN2001-001	XISTR NPN, 2SC2001L NEC	3
Q801	RHN3181-001	XISTR NPN, 2SC3181N-O TOSHIBA	1
Q802	RHP1264-001	XISTR PNP, 2SA1264N-O TOSHIBA	1
Q803	RHN0882-001	XISTR NPN, 2SD882P	1
Q901	RHP0772-001	XISTR PNP, 2SBT72P/Q NEC	1
Q907	RHM0882-001	XISTR NPN, 2SD882P	1

Resistors

R201, 252, 269, 270, 349, 350, 407, 408, 479, 480, 561, 623, 626, 672, 692, 729, 730, 805, 857, 912, 942,	QAF0650-472	4.7K OHM 1/6W 5% CF	21
R204, 255, 321, 322 329, 330, 333, 565, 570, 605, 606, 673, 674, 675, 676, 677, 678, 803, 823, 851	QAF0650-223	22K OHM 1/6W 5% CF	20
R205, 263, 264, 265, 266, 348, 513, 611, 612, 818	QAF0650-473	47K OHM 1/6W 5% CF	10
R209, 210, 211, 311, 312, 315, 316, 319, 327, 328, 351, 352, 433, 434, 503, 504, 505, 506, 523, 524, 525, 526, 549, 550, 552, 562, 671, 689, 820, 855, 859, 862, 863	QAF0650-102	1K OHM 1/6W 5% CF	33
R231, 232, 233, 234, 235, 236, 237, 238, 245, 271, 808	QAF0650-471	470 OHM 1/6W 5% CF	11
R239, 241, 247	QAF0650-221	220 OHM 1/6W 5% CF	3
R243, 244, 249, 256	QAF0650-181	180 OHM 1/6W 5% CF	4
R245	QAF0650-471	470 OHM 1/6W 5% CF	1
R246, 250	QAF0650-100	10 OHM 1/6W 5% CF	2
R251, 254, 257, 261 267, 268, 401, 402, 451, 452, 453, 454, 459, 460, 467, 468, 493, 494, 564, 566, 567, 568, 569, 654, 655, 658, 681, 686, 688, 703, 704, 709, 710, 715, 716, 753, 754, 801, 901, 903, 905, 907, 908	QAF0650-103	10K OHM 1/6W 5% CF	43
R253, 331, 332, 334, 432, 679, 682, 685, 690, 756	QAF0650-101	100 OHM 1/6W 5% CF	10
R258, 403, 404	QAF0650-474	470K OHM 1/6W 5% CF	3
R259, 323, 324, 325, 326, 469, 470, 483, 484, 541, 542, 543, 544, 607, 680, 691, 694, 695, 696, 719, 720, 733, 734, 864	QAF0650-104	100K OHM 1/6W 5% CF	24
R262, 309, 310, 313, 314	QAF0650-223	22K OHM 1/6W 5% CF	5
R317, 318	QAF0650-681	680 OHM 1/6W 5% CF	2
R339	QAF0650-225	2.2M OHM 1/6W 5% CF	1
R340, 615	QAF0650-475	4.7M OHM 1/6W 5% CF	2
R341, 616	QAF0650-680	68 OHM 1/6W 5% CF	2
R342	QAF0650-185	1.8M OHM 1/6W 5% CF	1
R343, 435, 436, 437 438, 441, 442, 751, 752, 761, 762, 763, 764	QAF0650-224	220K OHM 1/6W 5% CF	13
R344	QAF0650-184	180K OHM 1/6W 5% CF	1
R347, 353, 354, 651	QAF0650-105	1.0M OHM 1/6W 5% CF	4
R355, 356	QAF0650-333	33K OHM 1/6W 5% CF	2
R405, 406	QAF0650-823	82K OHM 1/6W 5% CF	2
R409, 410, 821	QAF0650-393	39K OHM 1/6W 5% CF	3
R411, 412	QAF0650-564	560K OHM 1/6W 5% CF	2
R413, 414, 653	QAF0650-273	27K OHM 1/6W 5% CF	3
R415, 416	QAF0650-562	5.6K OHM 1/6W 5% CF	2
R417, 418	QAF0650-122	1.2K OHM 1/6W 5% CF	2
R421, 422	QAF0650-331	330 OHM 1/6W 5% CF	2
R431, 755, 551, 902	QAF0650-152	1.5K OHM 1/6W 5% CF	4
R439, 440, 650, 757, 758, 906	QAF0650-222	2.2K OHM 1/6W 5% CF	6
R455, 456, 705, 706 801	QAF0650-202	2K OHM 1/6W 5% CF	5
R457, 458, 471, 472, 707, 708, 721, 722	QAF0650-913	91K OHM 1/6W 5% CF	8
R461, 462, 463, 464, 613, 614, 619, 652, 657, 711, 712, 713,	QAF0650-153	15K OHM 1/6W 5% CF	17

SUB300 ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
714, 806, 807, 856, 860			
R473, 474, 723, 724	QAF0650-243	24K OHM 1/6W 5% CF	4
R481, 482, 609, 610 731, 732	QAF0650-752	7.5K OHM 1/6W 5% CF	6
R501, 502, 521, 522 624, 625, 697, 810	QAF0650-563	56K OHM 1/6W 5% CF	8
R507, 508, 509, 510 527, 528, 529, 530	QAF0450-222	2.2K OHM 1/4W 5% CF340X2222934	8
R511, 512, 531, 532	QAF0250-479	4.7 OHM 1/2W 5% CF	4
R515, 518, 535, 538	QAF0450-101	100 OHM 1/4W 5% CF340X2101934	4
R516, 517, 536, 537	QAF0450-102	1.0K OHM 1/4W 5% CF340X2102934	4
R545, 546, 547, 548 813, 814	QVE3050-228	0.22 OHM 3W 5% HI RADIAL CEMENT FIXED	6
R553, 554, 555, 556	QAF0650-393	39K OHM 1/6W 5% CF	4
R617, 618, 621, 662	QAF0650-822	8.2K OHM 1/6W 5% CF	4
R620	QAM0410-104	100K OHM 1/4W 1% METAL FILM	1
R622	QAF0650-334	330K OHM 1/6W 5% CF	1
R656	QAF0650-300	30 OHM 1/6W 5% CF	1
R659	QAF0650-183	18K OHM 1/6W 5% CF	1
R660	QAF0650-272	2.7K OHM 1/6W 5% CF	1
R802	QAF0650-204	200K OHM 116W 5% CF	1
R804	QAF0650-363	36K OHM 1/6W 5% CF	1
R808	QAF0650-471	470 OHM 1/6W 5% CF	1
R809	QAF0650-392	3.9K OHM 1/6W 5% CF	1
R811, 812	QHS0250-100	10 OHM 1/2W 5% FUSEABLE	2
R815, 816	QAF0250-100	10 OHM 1/2W 5% CF	2
R817	QAF0250-101	100 OHM 1/2W 5% CF	1
R822	QAF0650-683	68K OHM 1/6W 5% CF	1
R854	QAF0650-133	13K OHM 1/6W 5% CF	1
R858	QAF0650-362	3.6K OHM 1/6W 5% CF	1
R861	QAF0650-683	68K OHM 1/6W 5% CF	1
R941	QAF0250-221	220 OHM 1/2W 5% CF	1
RA201, A203	QVP085A-472	RES ARRAY, 4.7K OHM 1/8W 5% 10 PIN	2
RA202	QVP0856-472	RES ARRAY, 4.7K OHM 1/8W 5% 6 PIN	1
RA204	QVP0859-472	RES ARRAY, 4.7K OHM 1/8W 5% 9 PIN	1
VR651	MRT0503-003	CNTL TRIMR, 50KB 30% P=5x5 mm RHO6IIC54J	1
Switches			
SW1	MSV0001-004	ROCKER SWITCH	1
SW201, SW202, SW203, SW204, SW205	MAT2029-001	AI TACT SW, SKHVBE3520 5.0 mm 160 gf	5

Wires

Ref.#	Part #	Description	Qty.
P201B(+) TO P201A(+) & JP423(-)	CL17OGBEGBE	SHLD CABLE, 170 mm BLACK	1
R18201 TO CH201	4999A-316	CON/WIRE, 9 COND 340mm FLAT WIRE PITCH=2.0mm	1
R18203 TO CN203	4999A-313	CON/WIRE, 7 COND 380mm 28 AWG PITCH=2.0mm	1
R1B502 TO CN502	50039300180	CON/WIRE, 9 COND 300 mm BLACK 26 AWG PITCH=2.5 mm	1
R1B801 TO CN801	50036150180	CON/WIRE 6 COND 150 mm BLACK 26 AWG PITCH=2.5 mm	1
R1B902 TO CN505	50033450180	CON/CABLE 3 COND 450 mm	1
RB505A TO R6505B	24684150880	FLAT/CABLE, 4 COND 150 mm	1
RIB202 TO CN202	4999A-314	CON/WIRE, 9 COND 340mm 28 AWG PITCH=2.0mm	1
RIB204 TO CN204	500331001BO	CON/WIRE, 3 COND 100 mm	1
RIB303 TO CN303	50024AJIBMM	CON/CABLE, 3 COND 100 mm BROWN	1
RIB304 TO CN304	50024AJ28MM	CON/CABLE, 3 COND 100 mm GRAY	1
RIB501 TO CN501	4999A-296	CON/WIRE, 8 COND 350 mm	1
RIB503 TO CN702	5002EBE18M	CON/CABLE 2 COND 250 mm BROWN	1
RIB504 TO CN503	5002EBJ28MM	CON/CABLE 2 COND 200 mm GRAY	1
RIB701 TO CN701	5002ECEABMM	CON/CABLE 2 COND 350 mm BLACK PITCH=2.5 mm	1
RIB702 TO CN504	5002ECJ4BI4M	CON/CABLE 2 COND 300 mm WHITE PITCH=2.5 gm	1
RIB804 TO CN804	5002EBJBBMN	CON/CABLE, 2 COND 200 mm RED PITCH=2.5 mm	1

VOLTAGE DIFERENCES

VOLTAGE	PART NO.	DESCRIPTION	QTY.
100V	47455-056	LINE CORD	1
100V	GSE0139-003	JACK PLATE	1
100V	KSA1600-001	FUSE	1
100V	TTK1000-002	TRANSFORMER	1
120V	47455-052	LINE CORD	1
120V	GSE0139-001	JACK PLATE	1
120V	KSA1600-001	FUSE	1
120V	TTK1200-005	TRANSFORMER	1
230V	2559-022122	LINE CORD	1
230V	GSE0139-002	JACK PLATE	1
230V	KSA2400-001	FUSE	1
230V	TTK2300-003	TRANSFORMER	1

SUB300B ELECTRICAL PARTS LIST

MAIN PCB ASSEMBLY

CAPACITORS

Ref.#	Part #	Description	Qty.
C201	PVE3950-102	ELECT 1000uF 6.3V 20% 85'C	1
C202	PRE3955-109	ELECT 1uF 50V 20% 85'C	1
C203, C204	PRD1335-180	DISC 18pF 50V 5% NPO	2
C205	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	1
C206	PRE3955-478	ELECT 0.47uF 50V 20% 85'C	1
C207	PRE3952-100	ELECT 10uF 16V 20% 85'C	1
C208	PRE3951-470	ELECT 47uF 10V 20% 85'C	1
C209, C310	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C311	PRE3953-470	ELECT 47uF 25V 20% 85'C	1
C312	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	1
C313	PRE3953-470	ELECT 47uF 25V 20% 85'C	1
C317, C318	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C319, C320	PRE3953-470	ELECT 47uF 25V 20% 85'C	2
C321-C324	PRE3955-109	ELECT 1uF 50V 20% 85'C	4
C325, C326	PRD3545-332	DISC 0.0033uF 50V 10% Y5P	2
C327, C328	PRD1335-470	DISC 47pF 50V 5% NPO	2
C329	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	1
C330	PRD1335-100	DISC 10pF 50V 5% NPO	1
C331	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	1
C332	PRE3953-470	ELECT 47uF 25V 20% 85'C	1
C333-C336	PRE3955-109	ELECT 1uF 50V 20% 85'C	4
C401, C402	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C403, C404	PRD8035-270	DISC 27pF 50V 5% SL	2
C405, C406	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C407, C408	PRM3737-683	MYLAR 0.068uF 100V 5%	2
C409, C410	PRM3737-123	MYLAR 0.012uF 100V 5%	2
C411, C412	PRE3952-100	ELECT 10uF 16V 20% 85'C	2
C413, C414	PRM3737-272	MYLAR 0.0027uF 100V 5%	2
C415, C416	PRM3737-223	MYLAR 0.022uF 100V 5%	2
C417, C418	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C419, C420	PRE3953-470	ELECT 47uF 25V 20% 85'C	2
C431, C432	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C433, C434	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	2
C435, C436	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C437, C438	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	2
C439, C440	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C441, C442	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C445	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	1
C451, C452	PRM3737-822	MYLAR 0.0082uF 100V 5%	2
C453-C456	PRM3737-273	MYLAR 0.027uF 100V 5%	4
C457-C460	PRM3737-472	MYLAR 0.0047uF 100V 5%	4
C463, C464	PRD3545-681	DISC 680pF 50V 10% Y5P	2
C465-C468	PRM3737-472	MYLAR 0.0047uF 100V 5%	4
C469, C470	PRD3545-221	DISC 220pF 50V 10% Y5P	2
C473-C476	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	4
C493, C494	PRE3955-100	ELECT 10uF 50V 20% 85'C	2
C601-C603	PRE3951-100	ELECT 10uF 10V 20% 85'C	3
C604	PRM3737-472	MYLAR 0.0047uF 100V 5%	1
C605	PRE3942-220	ELECT 22uF 16V 10% 85'C	1
C606	PRM3737-562	MYLAR 0.0056uF 100V 5%	1
C607	PRM3737-472	MYLAR 0.0047uF 100V 5%	1
C608	PRD3545-471	DISC 470pF 50V 10% Y5P	1
C609	PRE3951-221	ELECT 220uF 10V 20% 85'C	1
C610	PRM3737-473	MYLAR 0.047uF 100V 5%	1
C611	PRM3737-562	MYLAR 0.0056uF 100V 5%	1
C612, C613	PRE3951-100	ELECT 10uF 10V 20% 85'C	2
C614	PVM3737-224	MYLAR 0.22uF 100V 5% HI	1
C615	PRE3942-100	ELECT 10uF 16V 10% 85'C	1
C616	PRE3953-101	ELECT 100uF 25V 20% 85'C	1
C617-C619	PRE3951-100	ELECT 10uF 10V 20% 85'C	3
C620	PVP2637-684	METAL 0.68uF 100V 5% P:10.0mm	1
C621-C623	PVM3737-224	MYLAR 0.22uF 100V 5% HI	3
C624, C625	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	2
C626	PVM3737-224	MYLAR 0.22uF 100V 5% HI	1
C627-C630	PRM3737-104	MYLAR 0.1uF 100V 5%	3
C631, C632	PRM3737-223	MYLAR 0.022uF 100V 5%	2
C633-C636	PRM3737-104	MYLAR 0.1uF 100V 5%	4
C637, C638	PVP3935-681	POLY 680pF 50V 5%	2
C639, C640	PRM3737-473	MYLAR 0.047uF 100V 5%	2
C641	PRE3942-220	ELECT 22uF 16V 10% 85'C	1
C642	PRE3951-100	ELECT 10uF 10V 20% 85'C	1
C652	PRM3737-562	MYLAR 0.0056uF 100V 5%	1
C653	PRD3545-561	DISC 560pF 50V 10% Y5P	1
C654	PRM3737-683	MYLAR 0.068uF 100V 5%	1
C655	PRE3951-470	ELECT 47uF 10V 20% 85'C	1
C656, C657	PRM3737-104	MYLAR 0.1uF 100V 5%	2
C658	PRM3737-683	MYLAR 0.068uF 100V 5%	1
C659	PRD3545-562	DISC 5600pF 50V 10% Y5P	1
C660	PRD3545-561	DISC 560pF 50V 10% Y5P	1
C661	PRE3955-109	ELECT 1uF 50V 20% 85'C	1
C662	PRM3737-562	MYLAR 0.0056uF 100V 5%	1
C663	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	1
C664, C665	PRD1335-470	DISC 47pF 50V 5% NPO	2
C666	PRE3953-101	ELECT 100uF 25V 20% 85'C	1
C667	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	1
C670	PRE3953-101	ELECT 100uF 25V 20% 85'C	1
C671, C672	PRE3952-100	ELECT 10uF 16V 20% 85'C	2
C673	PRE3951-101	ELECT 100uF 10V 20% 85'C	1
C674	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	1
C675	PRE3955-109	ELECT 1uF 50V 20% 85'C	1
C681	PRE3953-101	ELECT 100uF 25V 20% 85'C	1
C682	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	1
C683	PRD4965-223	DISC 0.022uF 50V +80-20% Z5V	1

SUB300B ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
C690	PRE3952-100	ELECT 10uF 16V 20% 85'C	1
C701, C702	PRM3737-822	MYLAR 0.0082uF 100V 5%	2
C703-C706	PRM3737-273	MYLAR 0.027uF 100V 5%	4
C707-C710	PRM3737-472	MYLAR 0.0047uF 100V 5%	4
C713, C714	PRD3545-681	DISC 680pF 50V 10% Y5P	2
C715-C718	PRM3737-472	MYLAR 0.0047uF 100V 5%	4
C719, C720	PRD3545-221	DISC 220pF 50V 10% Y5P	2
C721-C724	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	4
C751, C752	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C753, C754	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	2
C755, C756	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C759-C762	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	4
C765, C766	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	2
C767, C768	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C851	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	1
C854, C855	PRM3737-183	MYLAR 0.018uF 100V 5%	2
C856	PRM3737-303	MYLAR 0.03uF 100V 5%	1
C941	PRE3951-470	ELECT 47uF 10V 20% 85'C	1
C942	PRE3955-479	ELECT 4.7uF 50V 20% 85'C	1
JP634- TO IC301 PIN10+	PRE3953-220	ELECT 22uF 25V 20% 85'C	1
R467, R468	PRM3737-392	MYLAR 0.0039uF 100V 5%	2
R715, R716	PRM3737-392	MYLAR 0.0039uF 100V 5%	2
Connectors			
CN201, CN202	CCN7879-029	CONNECTOR 7 PIN B 7B-PH-K TOP SIZE	2
CN203	CCN7879-027	CONNECTOR 9 PIN B 9B-PH-K TOP SIZE	1
CN204	CCN1500-023	CONNECTOR 3 PIN B 3B-XH-A TOP BASE	1
CN303, CN304	CCN1500-023	CONNECTOR 3 PIN B 3B-XH-A TOP BASE	2
CN502	CCN1500-033	CONNECTOR 9 PIN B 9B-XH-A TOP BASE	1
CN503, CN504	CCN1500-018	CONNECTOR 2 PIN B 2B-XH-A TOP BASE	2
CN505	CCN1500-023	CONNECTOR 3 PIN B 3B-XH-A TOP BASE	1
CN701, CN702	CCN1500-018	CONNECTOR 2 PIN B 2B-XH-A TOP BASE	2
CN804A	CCN1500-018	CONNECTOR 2 PIN B 2B-XH-A TOP BASE	1
DIODES			
D201, D202	RAD4148-001	DIODE SW 1N4148	2
D207	RAD4148-001	DIODE SW 1N4148	1
D301	RAD4148-001	DIODE SW 1N4148	1
D401, D402	RAD4148-001	DIODE SW 1N4148	2
D651, D652	RAD4148-001	DIODE SW 1N4148	2
D671	RAD4148-001	DIODE SW 1N4148	1
D680	RAD4148-001	DIODE SW 1N4148	1
D691	RAD4148-001	DIODE SW 1N4148	1
D751, D752	RAD4148-001	DIODE SW 1N4148	1
ZD301, ZD302	RAZ0859-070	DIODE ZENR 5.6~5.9V 0.5W	2
ZD401, ZD402	RAZ0859-077	DIODE ZENR 9.1~9.5V 0.5W	2
ZD681	RAZ0859-068	DIODE ZENR 5.0~5.2V 0.5W	1
ZD941	RAZ0859-071	DIODE ZENR 6.0~6.3V 0.5W	1
Integrated Circuits			
IC201	RHI4740-021	IC 42 PIN TMP47CH400 MICROPROCESSOR	1
IC202	RHI4094-001	IC 16 PIN TC4094BP 8 BIT FILT REGISTER	1
IC301	RHI4052-001	IC 16 PIN TC4052BP DIP MULTIPLEXER	1
IC302	RHI0740-001	IC 14 PIN TL074CN QUAD OP-AMP	1
IC401	RHI4558-001	IC 8 PIN 4558D DUAL OP-AMP	1
IC402	RHI9184-001	IC 16 PIN TC9184 BASS/TREBLE CONTROL	1
IC403	RHI4558-001	IC 8 PIN 4558D DUAL OP-AMP	1
IC404	RHI7535-001	IC 22 PIN LC7535 ELECTRIC VOLUME CONTROL	1
IC405, IC406	RHI0740-001	IC 14 PIN TL074CN QUAD OP-AMP	2
IC601	RHI2177-001	IC 56 PIN NJM2177A PRO LOGIC DECODER	1
IC651	RHI9702-001	IC 24 PIN NJU9702D DIGITAL DELAY	1
IC671	RHI4094-001	IC 16 PIN TC4094BP 8 BIT SHIFT REGISTER	1
IC681	RHI4052-001	IC 16 PIN TC4052BP MULTIPLEXER	1
IC682	RHI4066-001	IC 14 PIN MC14066BCP QUAD SWITCH	1
IC751	RHI4558-001	IC 8 PIN 4558D DUAL OP-AMP	1
IC752	RHI7535-001	IC 22 PIN LC7535 ELECTRIC VOLUME CONTROL	1
IC753, IC754	RHI0740-001	IC 14 PIN TL074CN QUAD OP-AMP	2
IC851	RHI4558-001	IC 8 PIN 4558D DUAL OP-AMP	1
Resistors			
C461, C462	QAF0650-682	RESISTOR 6.8K OHM 1/6W 5% CF	2
C711, C712	QAF0650-682	RESISTOR 6.8K OHM 1/6W 5% CF	2
R201	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R204	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R205	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	1
R209-R211	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	3
R231-R238	QAF0650-471	RESISTOR 470 OHM 1/6W 5% CF	8
R250	QAF0650-100	RESISTOR 10 OHM 1/6W 5% CF	1
R251	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R252	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R253	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1
R254	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R255	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R256	QAF0650-181	RESISTOR 180 OHM 1/6W 5% CF	1
R257	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1

SUB300B ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
R258	QAF0650-474	RESISTOR 470K OHM 1/6W 5% CF	1
R259	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	1
R261	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R262	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R263-R266	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	4
R267, R268	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R269, R270	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	2
R271	QAF0650-471	RESISTOR 470 OHM 1/6W 5% CF	1
R317, R318	QAF0650-681	RESISTOR 680 OHM 1/6W 5% CF	2
R319	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R321, R322	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	2
R323-R326	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	4
R327, R328	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	2
R329, R330	QAF0650-132	RESISTOR 1.3K OHM 1/6W 5% CF	2
R331, R332	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	2
R333	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R334	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1
R339	QAF0650-225	RESISTOR 2.2M OHM 1/6W 5% CF	1
R340	QAF0650-105	RESISTOR 1.0M OHM 1/6W 5% CF	1
R341	QAF0650-680	RESISTOR 68 OHM 1/6W 5% CF	1
R342	QAF0650-185	RESISTOR 1.8M OHM 1/6W 5% CF	1
R343	QAF0650-224	RESISTOR 220K OHM 1/6W 5% CF	1
R344	QAF0650-184	RESISTOR 180K OHM 1/6W 5% CF	1
R347	QAF0650-105	RESISTOR 1.0M OHM 1/6W 5% CF	1
R348	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	1
R349, R350	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	2
R351, R352	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	2
R353, R354	QAF0650-105	RESISTOR 1.0M OHM 1/6W 5% CF	2
R355, R356	QAF0650-333	RESISTOR 33K OHM 1/6W 5% CF	2
R401, R402	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R403, R404	QAF0650-474	RESISTOR 470K OHM 1/6W 5% CF	2
R405, R406	QAF0650-823	RESISTOR 82K OHM 1/6W 5% CF	2
R407, R408	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	2
R409, R410	QAF0650-393	RESISTOR 39K OHM 1/6W 5% CF	2
R411, R412	QAF0650-564	RESISTOR 560K OHM 1/6W 5% CF	2
R413, R414	QAF0650-273	RESISTOR 27K OHM 1/6W 5% CF	2
R415, R416	QAF0650-562	RESISTOR 5.6K OHM 1/6W 5% CF	2
R417, R418	QAF0650-122	RESISTOR 1.2K OHM 1/6W 5% CF	2
R421, R422	QAF0650-331	RESISTOR 330 OHM 1/6W 5% CF	2
R431	QAF0650-152	RESISTOR 1.5K OHM 1/6W 5% CF	1
R432	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1
R433, R434	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	2
R435-R438	QAF0650-224	RESISTOR 220K OHM 1/6W 5% CF	4
R439, R440	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	2
R441, R442	QAF0650-224	RESISTOR 220K OHM 1/6W 5% CF	2
R451-R454	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	4
R455, R456	QAF0650-202	RESISTOR 2K OHM 1/6W 5% CF	2
R457, R458	QAF0650-913	RESISTOR 91K OHM 1/6W 5% CF	2
R459, R460	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R461-R464	QAF0650-203	RESISTOR 20K OHM 1/6W 5% CF	4
R469, R470	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	2
R471, R472	QAF0650-913	RESISTOR 91K OHM 1/6W 5% CF	2
R473, R474	QAF0650-243	RESISTOR 24K OHM 1/6W 5% CF	2
R479, R480	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	2
R481, R482	QAF0650-752	RESISTOR 7.5K OHM 1/6W 5% CF	2
R483, R484	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	2
R493, R494	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R605, R606	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	2
R607	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	1
R609, R610	QAF0650-752	RESISTOR 7.5K OHM 1/6W 5% CF	2
R611, R612	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	2
R613, R614	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	2
R615	QAF0650-475	RESISTOR 4.7M OHM 1/6W 5% CF	1
R616	QAF0650-680	RESISTOR 68 OHM 1/6W 5% CF	1
R617, R618	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	2
R619	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	1
R620	QAM0410-104	RESISTOR 100K OHM 1/4W 1% MF	1
R621	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	1
R622	QAF0650-334	RESISTOR 330K OHM 1/6W 5% CF	1
R623	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R624, R625	QAF0650-563	RESISTOR 56K OHM 1/6W 5% CF	2
R626	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R650	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	1
R651	QAF0650-105	RESISTOR 1.0M OHM 1/6W 5% CF	1
R652	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	1
R653	QAF0650-273	RESISTOR 27K OHM 1/6W 5% CF	1
R654, R655	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R656	QAF0650-300	RESISTOR 30 OHM 1/6W 5% CF	1
R657	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	1
R658	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R659	QAF0650-183	RESISTOR 18K OHM 1/6W 5% CF	1
R660	QAF0650-272	RESISTOR 2.7K OHM 1/6W 5% CF	1
R662	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	1
R671	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R672	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R673-R678	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	6
R679	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1
R680	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	1
R681	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R682, R685	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	2
R686, R688	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R689	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R690	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1
R691	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	1
R692	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R694-R696	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	3

SUB300B ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
R697	QAF0650-563	RESISTOR 56K OHM 1/6W 5% CF	1
R703, R704	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R705, R706	QAF0650-202	RESISTOR 2K OHM 1/6W 5% CF	2
R707, R708	QAF0650-913	RESISTOR 91K OHM 1/6W 5% CF	2
R709, R710	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R711-R714	QAF0650-203	RESISTOR 20K OHM 1/6W 5% CF	4
R719, R720	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	2
R721, R722	QAF0650-913	RESISTOR 91K OHM 1/6W 5% CF	2
R723, R724	QAF0650-243	RESISTOR 24K OHM 1/6W 5% CF	2
R729, R730	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	2
R731, R732	QAF0650-752	RESISTOR 7.5K OHM 1/6W 5% CF	2
R733, R734	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	2
R751, R752	QAF0650-224	RESISTOR 220K OHM 1/6W 5% CF	2
R753, R754	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R755	QAF0650-152	RESISTOR 1.5K OHM 1/6W 5% CF	1
R756	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	1
R757, R758	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	2
R761-R764	QAF0650-224	RESISTOR 220K OHM 1/6W 5% CF	4
R851	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R854	QAF0650-133	RESISTOR 13K OHM 1/6W 5% CF	1
R855	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R856	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	1
R857	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R858	QAF0650-362	RESISTOR 3.6K OHM 1/6W 5% CF	1
R859	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R860	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	1
R861	QAF0650-683	RESISTOR 68K OHM 1/6W 5% CF	1
R862, R863	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	2
R864	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	1
R941	QAF0650-221	RESISTOR 220 OHM 1/2W 5% CF	1
R942	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
RA201	QVP085A-472	RES ARRAY 4.7K OHM 1/8W 5% 10 PIN	1
RA202	QVP0856-472	RES ARRAY 4.7K OHM 1/8W 5% 6 PIN	1
RA203	QVP085A-472	RES ARRAY 4.7K OHM 1/8W 5% 10 PIN	1
RA204	QVP0859-472	RES ARRAY 4.7K OHM 1/8W 5% 9 PIN	1
Transistors			
Q201-Q204	RAP0733-001	XISTR PNP 2SA733Q,P NEC	4
Q205	RAN0945-001	XISTR NPN 2SC945P NEC	1
Q206	RAP0733-001	XISTR PNP 2SA733Q,P NEC	1
Q207	RAN0945-001	XISTR NPN 2SC945P NEC	1
Q208-Q210	RAP0733-001	XISTR PNP 2SA733Q,P NEC	3
Q211-Q216	RAN0945-001	XISTR NPN 2SC945P NEC	6
Q301, Q302	RAN0945-001	XISTR NPN 2SC945P NEC	2
Q491, Q492	RAN0945-001	XISTR NPN 2SC945P NEC	2
Q671	RAN0945-001	XISTR NPN 2SC945P NEC	1
Q672	RAP0733-001	XISTR PNP 2SA733Q,P NEC	1
Q673, Q674	RAN0945-001	XISTR NPN 2SC945P NEC	2
Q681	RAP0733-001	XISTR PNP 2SA733Q,P NEC	1
Q941	RAN2001-001	XISTR NPN 2SC2001L NEC	1
Wires			
IC671 PIN5,6 TO DIODE"	24682400BBM	FLAT CABLE 2 COND 400 mm BLACK	
P2A TO P2B	5820-103BB	WIRE 26 GA 100 mm ORANGE	
P3A TO P3B	5820-089BB	WIRE 26 GA 80 mm WHITE	
P4A TO P4B	5820-154BB	WIRE 26 GA 150 mm YELLOW	
P5A TO P5B	5820-154BB	WIRE 26 GA 150 mm YELLOW	
P691A TO P691B	5820-480BB	WIRE 26 GA 480 mm BLACK P201B(+) TO P201A(+) CL170GBEGBE SHLD CABLE 170 mm BLACK & JP423(-)	
[R723] TO SOLDER LUG	5820-080BB	WIRE 26 GA 80 mm BLACK	
Miscellaneous			
CR201	JQC6071-419	CRYSTAL 4.194304 MHz L=5.0mm	
L201	SAC7414-100	CHOKE 10 uH AI	
[R723]	CSL6521-002	SOLDER LUG OD7.0xID3.5xT0.3 mm NICKEL	
VR651	MRT0503-003	CNTL TRIMR 50KB 30% P=5x5 mm RHO611C54J	
XL601	JRN6078-200	RESONATOR 2 MHz	
	DSS0011-001	SPACER SUP PINGOOD RL1/6S	

SUB300B AMPLIFIER PCB ASSEMBLY PARTS LIST

CAPACITORS			
C501, C502	PRD3545-102	DISC 1000pF 50V 10% Y5P	2
C503, C504	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C505, C506	PRE3954-101	ELECT 100uF 35V 20% 85'C	2
C507, C508	PRE3955-470	ELECT 47uF 50V 20% 85'C	2
C509, C510	PRM3745-104	MYLAR 0.1uF 50V 10%	2
C511	PRE3954-101	ELECT 100uF 35V 20% 85'C	1
C512	PRE3955-100	ELECT 10uF 50V 20% 85'C	1
C515, C516	PRD3545-221	DISC 220pF 50V 10% Y5P	2
C521, C522	PRD3545-102	DISC 1000pF 50V 10% Y5P	2
C523, C524	PRE3955-109	ELECT 1uF 50V 20% 85'C	2
C525, C526	PRE3954-101	ELECT 100uF 35V 20% 85'C	2
C527, C528	PRE3955-470	ELECT 47uF 50V 20% 85'C	2
C529, C530	PRM3745-104	MYLAR 0.1uF 50V 10%	2
C531	PRE3954-101	ELECT 100uF 35V 20% 85'C	1
C532	PRE3955-100	ELECT 10uF 50V 20% 85'C	1
C533	PRE3952-100	ELECT 10uF 16V 20% 85'C	1
C534	PRE3955-109	ELECT 1uF 50V 20% 85'C	1
C535, C536	PRD3545-221	DISC 220pF 50V 10% Y5P	2

SUB300B ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
C541	PRE3951-100	ELECT 10uF 10V 20% 85'C	1
C801, C802	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C803, C804	PRM3737-104	MYLAR 0.1uF 100V 5%	2
C805	PRM3737-683	MYLAR 0.068uF 100V 5%	1
C806	PRM3737-123	MYLAR 0.012uF 100V 5%	1
C807	PRM3737-563	MYLAR 0.056uF 100V 5%	1
C808	PRE3955-229	ELECT 2.2uF 50V 20% 85'C	1
C809	PRD1335-150	DISC 15pF 50V 5% NPO	1
C810	PRD3545-102	DISC 1000pF 50V 10% Y5P	1
C811	PRM3737-683	MYLAR 0.068uF 100V 5%	1
C812	PRM3737-393	MYLAR 0.039uF 100V 5%	1
C813	PRE3951-101	ELECT 100uF 10V 20% 85'C	1
C814	PRD3545-101	DISC 100pF 50V 10% Y5P	1
C820, C821	PVE3955-332	ELECT 3300uF 50V 20% 85'C	2
C822, C823	PRM3745-104	MYLAR 0.1uF 50V 10%	2
C830-C833	PRM3737-473	MYLAR 0.047uF 100V 5%	4
C903-C910	PRD4965-203	DISC 0.02uF 50V +80-20% Z5V	8
C913, C914	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
C915, C916	PVE3954-222	ELECT 2200uF 35V 20% 85'C	2
C917	PVE3955-332	ELECT 3300uF 50V 20% 85'C	1
C918	PRM3745-104	MYLAR 0.1uF 50V 10%	1
C919	PVE3955-332	ELECT 3300uF 50V 20% 85'C	1
C920	PRM3745-104	MYLAR 0.1uF 50V 10%	1
C921-C924	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	4
C925	PRE3951-100	ELECT 10uF 10V 20% 85'C	1
C927	PRE3953-100	ELECT 10uF 25V 20% 85'C	1
C929, C930	PRD3965-104	DISC 0.1uF 50V +80-20% Y5V	2
Connectors			
CN501	CCN3962-008	CONNECTOR 8 PIN CL3962WVO	1
CN801	CCN1500-024	CONNECTOR 6 PIN B 6B-XH-A	1
CN802 TO SPK	VWT13A3-025	WIRE TERM 250 mm WIRE ASSY	
CN803	CCN3962-003	CONNECTOR 3 PIN CL3962WVO	1
CN901	CCN3962-006	CONNECTOR 6 PIN CL3962WVO	1
PA TO IC671 PIN 7 & PB TO IC671 PIN 5	24682180BBM	FLAT CABLE 2 COND 180 mm BLACK	
P691B TO P691A	5820-100BC	WIRE 26 GA 100 mm BLACK	
RB505A TO RB505B	24684150BB0	FLAT CABLE 4 COND 150 mm BLACK	
RIB201 TO CN201	4999A-316	CON/WIRE AY 9 COND 340 mm FLAT	
RIB202 TO CN202	4999A-314	CON/WIRE AY 9 COND 340 mm	
RIB203 TO CN203	4999A-313	CON/WIRE AY 7 COND 380 mm	
RIB502 TO CN502	500393001B0	COND WIRE 9 COND 300 mm BLACK	
RIB503 TO CN702	5002EBE1BMM	COND WIRE 2 COND 250 mm BROWN	
RIB504 TO CN503	5002EBJ2BMM	COND WIRE 2 COND 200 mm GREY	
RIB701 TO CN701	5002ECEABMM	COND WIRE 2 COND 350 mm BLACK	
RIB702 TO CN504	5002ECJ4BMM	COND WIRE 2 COND 300 mm WHITE	
RIB801 TO CN801	500361501B0	COND WIRE 6 COND 150 mm BLACK	
RIB804 TO CN804	5002EBJBBMM	COND WIRE 2 COND 200 mm RED	
RIB902 TO CN505	500334501B0	COND WIRE 3 COND 450 mm BLACK	

Ref.#	Part #	Description	Qty.
Diodes			
D241	RAD4148-001	DIODE SW 1N4148	1
D501	RAD4001-001	RECTIFIER 1N4001 1.0A 35VRMS	1
D503-D514	RAD4148-001	DIODE SW 1N4148	12
D801	RAD4001-001	RECTIFIER 1N4001 1.0A 35VRMS	1
D802-D806	RAD4148-001	DIODE SW 1N4148	5
D810-D813	RHD5401-001	RECTIFIER 1N5401 3.0A 70VRMS	4
D903-D906	RAD4001-001	RECTIFIER 1N4001 1.0A 35VRMS	4
D907-D910	RHD5401-001	RECTIFIER 1N5401 3.0A 70VRMS	4
D915	RAD4001-001	RECTIFIER 1N4001 1.0A 35VRMS	1
JP287, JP288	RAD4148-001	DIODE SW 1N4148	2
Fuses			
F801, F802	KSA2315-001	FUSE 3.15A 250V SLOW VDE	2
F902, F903	KSA2100-001	FUSE 1.00A 250V SLOW VDE	2
Integrated Circuits			
IC501, IC502	RHI4151-001	IC 18 PIN STK4151MK5 STEREO AMP	2
IC801	RHI4558-001	IC 8 PIN JRC4558D DUAL OP-AMP	1
IC802	RHI1298-001	IC 14 PIN uPC1298VNEC AMP DRIVER	1
IC901	RHI7815-001	IC 3 PIN 7815 REGULATOR +15V 1A	1
IC902	RHI7806-001	IC 3 PIN MC7806ACT REGULATOR +6V 1A	1
IC903	RHI7915-001	IC 3 PIN 7915 REGULATOR -15V 1A	1
LED s			
LD201-LD208	KEG0052-002	LED 2x5 mm GREEN 523VGD-AA	8
LD210A-LD216A	KEG0052-002	LED 2x5 mm GREEN 523VGD-AA	7
LD210B-LD216B	KEG0052-002	LED 2x5 mm GREEN 523VGD-AA	7
LD210C	KEG0052-002	LED 2x5 mm GREEN 523VGD-AA	1
LD212C	KEG0052-002	LED 2x5 mm GREEN 523VGD-AA	1
LD216C	KEG0052-002	LED 2x5 mm GREEN 523VGD-AA	1
LD217A, LD218A	KEG0052-003	LED 2x5 mm RED 523ID/LD-A	2
LD217B, LD218B	KEG0052-003	LED 2x5 mm RED 523ID/LD-A	2
LD218C	KEG0052-003	LED 2x5 mm RED 523ID/LD-A	1
LD219	KEG0052-002	LED 2x5 mm GREEN 523VGD-AA	1
Relays			
RL501, RL502	MRL2212-002	RELAY MI-SH-212LM 12V DC 44mA	2
RL801	MRL2212-005	RELAY SHINMEI RPA-12V DC 10A	1
Resistors			
R239, R241	QAF0650-221	RESISTOR 220 OHM 1/6W 5% CF	2
R243, R244	QAF0650-181	RESISTOR 180 OHM 1/6W 5% CF	2
R245	QAF0650-471	RESISTOR 470 OHM 1/6W 5% CF	1
R246	QAF0650-100	RESISTOR 10 OHM 1/6W 5% CF	1
R247	QAF0650-221	RESISTOR 220 OHM 1/6W 5% CF	1
R249	QAF0650-181	RESISTOR 180 OHM 1/6W 5% CF	1
R501, R502	QAF0650-563	RESISTOR 56K OHM 1/6W 5% CF	2

SUB300B ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
R503-R506	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	4
R507-R510	QAF0450-221	RESISTOR 2.2K OHM 1/4W 5% CF	4
R511, R512	QAF0250-479	RESISTOR 4.7 OHM 1/2W 5% CF	2
R513, R514	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	2
R515	QAF0450-101	RESISTOR 100 OHM 1/4W 5% CF	1
R516, R517	QAF0450-102	RESISTOR 1K OHM 1/4W 5% CF	2
R518	QAF0450-101	RESISTOR 100 OHM 1/4W 5% CF	1
R521, R522	QAF0650-563	RESISTOR 56K OHM 1/6W 5% CF	2
R523-R526	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	4
R527-R530	QAF0450-221	RESISTOR 2.2K OHM 1/4W 5% CF	4
R531, R532	QAF0250-479	RESISTOR 4.7 OHM 1/2W 5% CF	2
R533, R534	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	2
R535	QAF0450-101	RESISTOR 100 OHM 1/4W 5% CF	1
R536, R537	QAF0450-102	RESISTOR 1K OHM 1/4W 5% CF	2
R538	QAF0450-101	RESISTOR 100 OHM 1/4W 5% CF	1
R541-R544	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	4
R545-R548	QAF0650-181	RESISTOR 0.22 OHM 3W 5% CEMENT	4
R549, R550	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	2
R551	QAF0650-152	RESISTOR 1.5K OHM 1/6W 5% CF	1
R552	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R553-R556	QAF0650-393	RESISTOR 39K OHM 1/6W 5% CF	4
R561	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R562	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R564	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R565	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R566-R569	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	4
R570	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R801	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R802	QAF0650-204	RESISTOR 200K OHM 1/6W 5% CF	1
R803	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R804	QAF0650-363	RESISTOR 36K OHM 1/6W 5% CF	1
R805	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
R806, R807	QAF0650-153	RESISTOR 15K OHM 1/6W 5% CF	2
R808	QAF0650-471	RESISTOR 470 OHM 1/6W 5% CF	1
R809	QAF0650-392	RESISTOR 3.9K OHM 1/6W 5% CF	1
R810	QAF0650-563	RESISTOR 56K OHM 1/6W 5% CF	1
R811, R812	QHS0250-100	RESISTOR 10 OHM 1/2W 5% FUSEABLE	2
R813, R814	QVE3050-228	RESISTOR 0.22 OHM 3W 5% CEMENT	2
R815, R816	QAF0250-100	RESISTOR 10 OHM 1/2W 5% CF	2
R817	QAF0250-101	RESISTOR 100 OHM 1/2W 5% CF	1
R818	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	1
R820	QAF0650-102	RESISTOR 1K OHM 1/6W 5% CF	1
R821	QAF0650-393	RESISTOR 39K OHM 1/6W 5% CF	1
R822	QAF0650-683	RESISTOR 68K OHM 1/6W 5% CF	1
R823	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	1
R901	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R902	QAF0650-152	RESISTOR 1.5K OHM 1/6W 5% CF	1
R903	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R904	QAF0650-473	RESISTOR 47K OHM 1/6W 5% CF	1
R905	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R906	QAF0650-222	RESISTOR 2.2K OHM 1/6W 5% CF	1
R907, R908	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	2
R912	QAF0650-472	RESISTOR 4.7K OHM 1/6W 5% CF	1
VR801	QAF0650-202	RESISTOR 2K OHM 1/6W 5% CF	1
Transistors			
Q501-Q504	RAN0945-001	XISTR NPN 2SC945P NEC	4
Q505	RAP0733-001	XISTR PNP 2SA733Q,P NEC	1
Q507-Q510	RAN0945-001	XISTR NPN 2SC945P NEC	4
Q511	RAN2001-001	XISTR NPN 2SC2001L NEC	1
Q801	RHD5198-001	XISTR NPN 2SC5198-0	1
Q802	RHP1941-001	XISTR PNP 2SA1941-0	1
Q803	RHN0882-001	XISTR NPN 2SD882	1
Q804	RAN0945-001	XISTR NPN 2SC945P NEC	1
Q805	RAN2001-001	XISTR NPN 2SC2001L NEC	1
Q806	RAN0945-001	XISTR NPN 2SC945P NEC	1
Q901	RHP0772-001	XISTR PNP 2SB772P/Q NEC	1
Q902, Q905	RAN0945-001	XISTR NPN 2SC945P NEC	2
Q906	RAP0733-001	XISTR PNP 2SA733Q,P NEC	1
Q907	RHN0882-001	XISTR NPN 2SD882	1
Q908	RAN0945-001	XISTR NPN 2SC945P NEC WIRES	1
Miscellaneous			
F801, F802	CFC2557-001	FUSE CLI P 5 D 5 X 20FUSE	2
F902, F903	CFC2557-001	FUSE CLI P 5 D 5 X 20FUSE	2
L501-L504	SHR6619-001	RF COIL 1uH MDEC T40818-08	4
L801	SHR6619-001	RF COIL 1uH MDEC T40818-08	1
ON HEAT SINK-2	H100301-306	SCREW T3.0xL6.0mm BLACK	1
ON IC901	GAL0010-001	HEAT SINK TOHEI 7CD	1
ON IC902	GAL0007-001	HEAT SINK USE MKH-610	1
IC1298-1	HWF8335-005	WASHER FIB OD8.3xID3.5xT0.5mm	1
SW201-SW205	MAT2029-001	TACT SW 5.0 mm 160 gf ALPS SKHVBE3520	5
	001X0776-001	SIL PAD 3000 +-500 LBS	
	GSI0003-001	SI RUBBER 16x28x0.3t mm	

SUB300B CONTROL PANEL ASSY (SUB ASSY)

	BPK5031-000	CNTL KNOB
	BPF5033-001	CNTL PANEL
	APE0161-C32	CNTL PCB AY CONTROL PCB ASSY
	BNP0027-001	PVC PLATE
	H101001-108	SCREW T3.0x1.27p-2RH xL8.0 mm NICKEL

SUB300B ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.

SUB300B / 230 PROTECT CIRCUIT PCB ASSEMBLY PARTS LIST

Ref.#	Part #	Description	Qty.
Capacitors			
C1, C2	PRD3965-104	DISC 0.1uF 50V 80-20% Y5V	2
C3, C4	PRD3965-104	ELECT 100uF 50V 20% 85'C	2
Resistors			
R1	QAF0650-103	RESISTOR 10K OHM 1/6W 5% CF	1
R2	QAF0650-822	RESISTOR 8.2K OHM 1/6W 5% CF	1
R3	QAF0650-271	RESISTOR 270 OHM 1/6W 5% CF	1
R4	QAF0650-474	RESISTOR 470K OHM 1/6W 5% CF	1
R5	QAF0650-104	RESISTOR 100K OHM 1/6W 5% CF	1
R6, R7	QAF0650-101	RESISTOR 100 OHM 1/6W 5% CF	2
R8	QAF0650-220	RESISTOR 22 OHM 1/6W 5% CF	1
Wires			
B+15V TO RIB902 PIN1	5820-222BB	WIRE 26 GA 220 mm RED	
B-15V TO RIB902 PIN2	5820-225BB	WIRE 26 GA 220 mm GREEN	
GND TO RIB902 PIN3	5820-220BB	WIRE 26 GA 220 mm BLACK	
P-MUTE TO Q908(B)	5820-154BB	WIRE 26 GA 150 mm YELLOW TO-X'TER TO XISTR (B)+(C)	
5820-246BB	WIRE 26 GA	240 mm BLUE XISTR (E) TO CN802(GND)	
5820-230BB	WIRE 26 GA	230 mm BLACK	
Miscellaneous			
IC1	RHI4558-001	IC 8 PIN JRC4558D JRC SLOT INTO TRANSFORMER	1
RAN0945-001	XISTR NPN	SC945P NEC TO XISTR NPN (2SC945P)	1

SUB300b / 230 REAR AMPLIFIER ASSY (SUB ASSY)

Ref.#	Part #	Description	Qty.
AUDIO/SUBWOOFER PCB BKT	GSE0140-000	BRACKET SECC	
BETWEEN THERMAL PCB & BKT	BRF0024-001	FEET RUBBER FEET	
	GAL0055-002	HEAT SINK AL	
X'FORMER TO H/SINK-4	HNI1482	NUT @14x3.5 mm	
	TTK2300-003	PWR TRANS 230V 50W EI-96	
IC501-2, IC502-2	H041001-314	SCREW T3.0x1.27p-2RHxL14.0mm BLACK	
CENTER XISTR SCREW TO H/SINK	H041002-308	SCREW T3.0x1.4pxL8.0 mm W/WASHER BLK	
X'FORMER TO H/SINK-4	H060404-321	SCREW M3.5x0.6pxL21.0mm WAFER BLK	
BKT TO PCB-8	H120301-308	SCREW T3.0x0.5pxL8.0 mm PAN HEAD BLK	
THERMAL PCB TO BKT-1	H120301-312	SCREW T3.0x0.5pxL12.0mm PAN HEAD BLK	
PCB BKT TO H/SINK-4	H120301-314	SCREW T3.0x0.5pxL14.0mm PAN HEAD BLK	
AUDIO PCB TO H/SINK-2	H120302-308	SCREW T3.0x0.5pxL8.0 mm W/WASHER BLK	
BETWEEN THERMAL	DSS0002-006	SPACER PCB & BKT OD5.0xID3.1xH5.0mm	
X'FORMER-1	BNP0035-001	X'MER PLT L420xW120 mm UL	
PCB BKT TO PCB-1	HWF8335-005	WASHER FIB OD8.3xID3.5xT0.5mm RED	
X'FORMER TO H/SINK-4	HWS1550-515	WASHER STL OD15.0xID5.0xT1.5mm ZINC	

SUB300B / 230 JACK PLATE ASSY (SUB ASSY)

Ref.#	Part #	Description	Qty.
	CCN0027-004	AC CONNTOR HW-C3 AC CORD	
	DBU0002-001	BUSHING PINGOOD 4RF-5	
	KSA2400-002	FUSE 4A 250V SLOW	
	DFH1229-001	FUSE HOLDR FH-B02 10A; 5.2x20 mm	
	GSE0139-007	JACK PLATE SECC 230V	
	APE0163-C01	JACK PCB AY JACK PCB ASSY	
	2559-022122	LINE CORD VDE 1980 mm AC SW TO X'FORMER	
	2559-080022	LINE LINK 370 mm BLACK	
	BPA0021-000	REAR COVER SW ROCKER	
	BRF0007-001	RUBBER BLACK	
	BRB0003-001	RUBBER BUS NR-3	
	BRB0004-001	RUBBER BUS NR-3	
	BRB0005-001	RUBBER BUS NR-3 SW TO JACK PLATE	
	H060301-314	SCREW M3.0x0.5pxL14.0 mm BLACK	
	H101001-310	SCREW T3.0x1.27p-2RHxL10.0 mm BLACK	
	MSV0001-004	SW ROCKER 5A AC 250V TV-5 FUSE HOLDER-2	

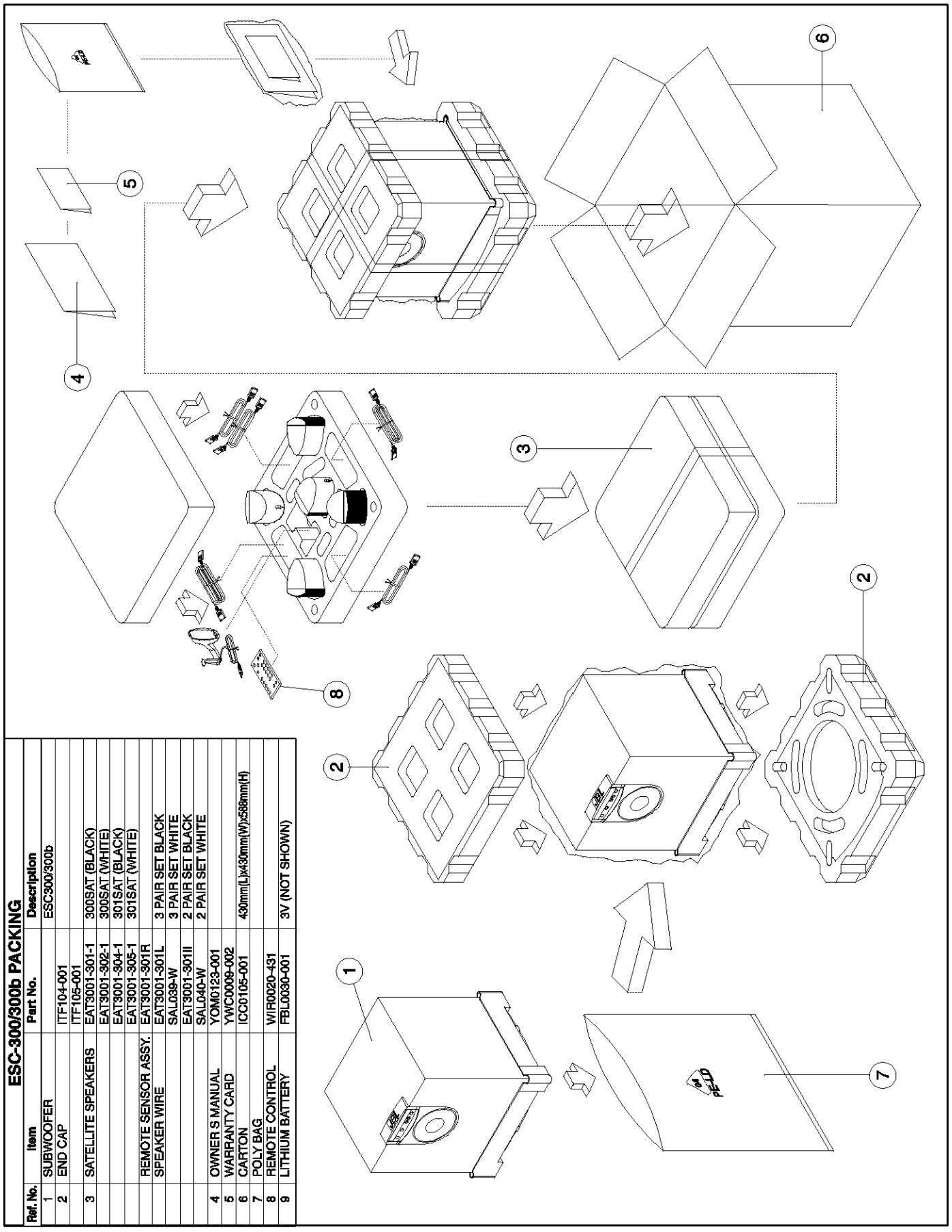
SUB300b JACK PCB ASSEMBLY PARTS LIST

Ref.#	Part #	Description	Qty.
Capacitors			
C210	PRD3965-104	DISC 0.1uF 50V 80-20% Y5V	1
C305-C308	PRD3545-101	DISC 100pF 50V 10% Y5P	4
Jack / Terminal			

SUB300B ELECTRICAL PARTS LIST Cont...

Ref.#	Part #	Description	Qty.
JK201	CJM9380-028	PHONE JACK 3542-01-030 JYE TAI 3.5DIM	1
JK302	CJR6504-002	RCA JACK 4P RJ-1073-10-0300A JYE TAI RED/WHT	1
JK501	CTM0005-001	TERMINAL JACK ASSY MOLEX TYPE	1
Resistors			
R309-R316	QAF0650-223	RESISTOR 22K OHM 1/6W 5% CF	8
Wires			
GND To Solder Lug	5820-080BB	WIRE 26 GA 80 mm BLACK	
RIB204 TO CN204	500331001B0	COND WIRE 3 COND 100 mm BLACK	
RIB303 TO CN303	50024AJ1BMM	COND WIRE 3 COND 100 mm BROWN	
RIB304 TO CN304	50024AJ2BMM	COND WIRE 3 COND 100 mm GREY	
RIB501 TO CN501	4999A-296	CON/WRE AY 8 COND 350 mm	
Miscellaneous			
L202	SAC7414-100	CHOKE 10uH AI	
WIRE TO JACK PLT	CSL6521-002	SOLDER LUG OD7.0xID3.5xT0.3 mm NICKEL	

SUB300/SUB300B PACKING EXPLODED VIEW

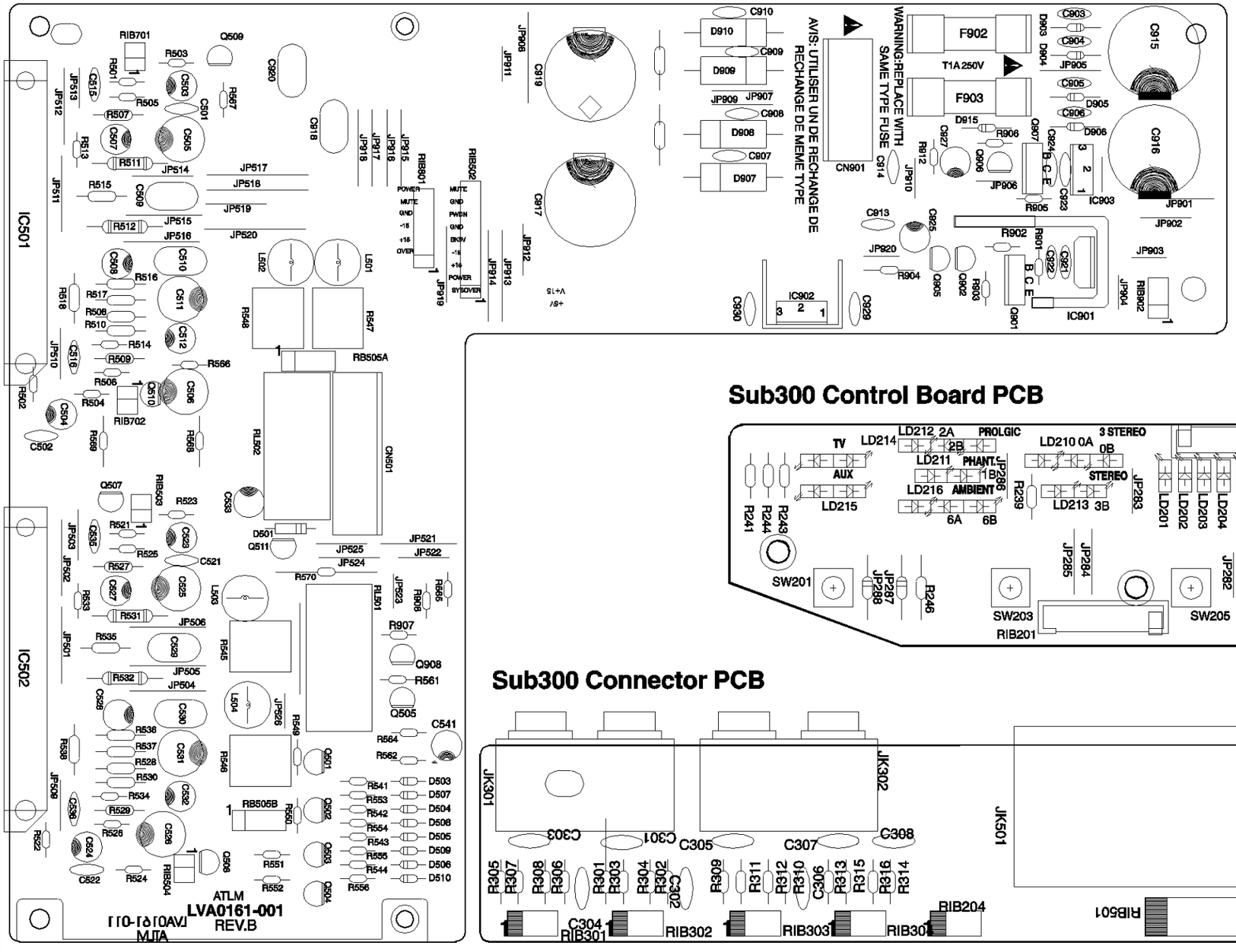


ESC-300/300b PACKING

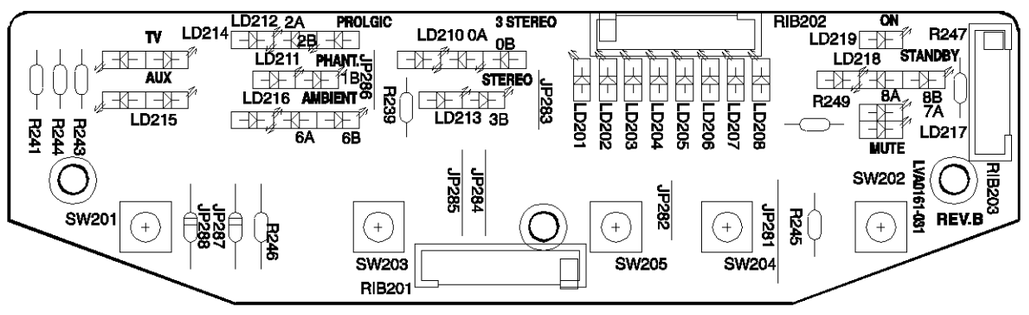
Ref. No.	Item	Part No.	Description
1	SUBWOOFER		ESC300/300b
2	END CAP	ITF104-001	
		ITF105-001	
3	SATELLITE SPEAKERS	EAT3001-301-1	300SAT (BLACK)
		EAT3001-302-1	300SAT (WHITE)
		EAT3001-304-1	301SAT (BLACK)
		EAT3001-305-1	301SAT (WHITE)
	REMOTE SENSOR ASSY.	EAT3001-301R	
	SPEAKER WIRE	EAT3001-301L	3 PAIR SET BLACK
		SAL039-W	3 PAIR SET WHITE
		EAT3001-301II	2 PAIR SET BLACK
		SAL040-W	2 PAIR SET WHITE
4	OWNER S MANUAL	YOM0123-001	
5	WARRANTY CARD	YWC0008-002	
6	CARTON	ICC0105-001	430mm(L)x430mm(W)x588mm(H)
7	POLY BAG		
8	REMOTE CONTROL	WIR0020-431	
9	LITHIUM BATTERY	FBL0030-001	3V (NOT SHOWN)

SUB300 POWER AMP, CONTROL & CONNECTOR PCB S

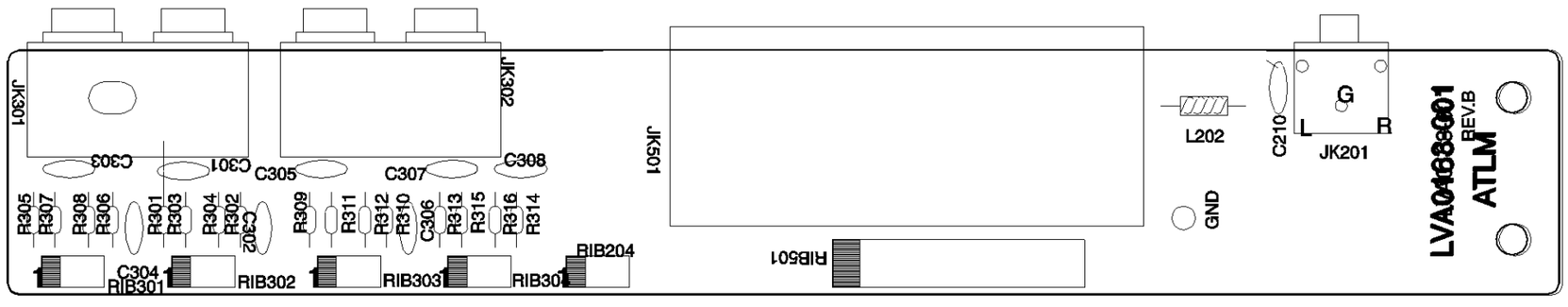
Sub300 Power Amplifier PCB



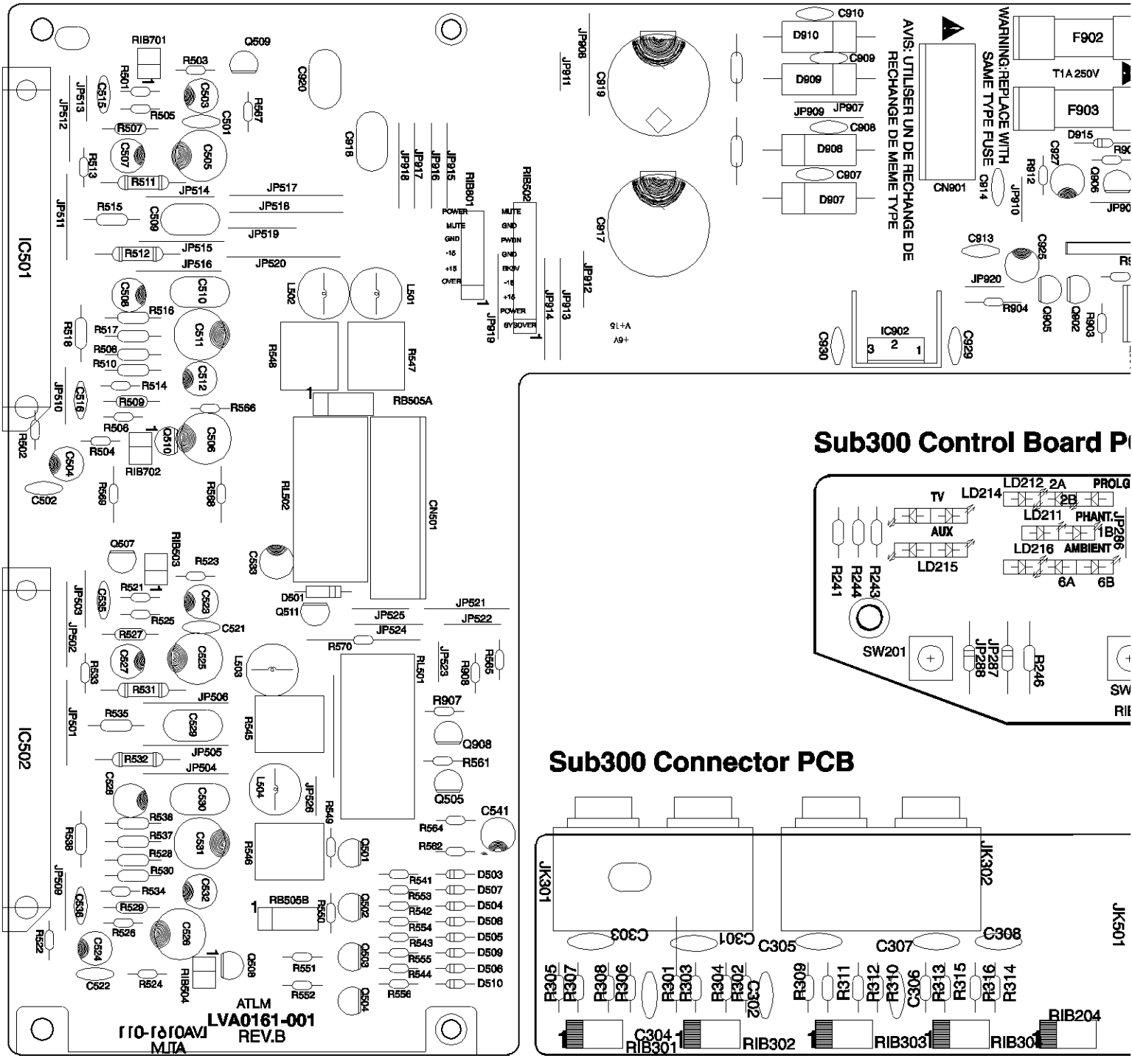
Sub300 Control Board PCB



Sub300 Connector PCB



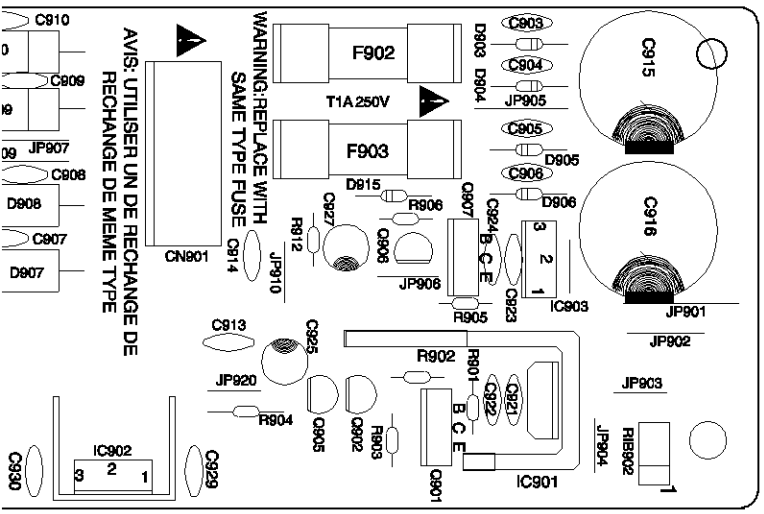
Sub300 Power Amplifier PCB



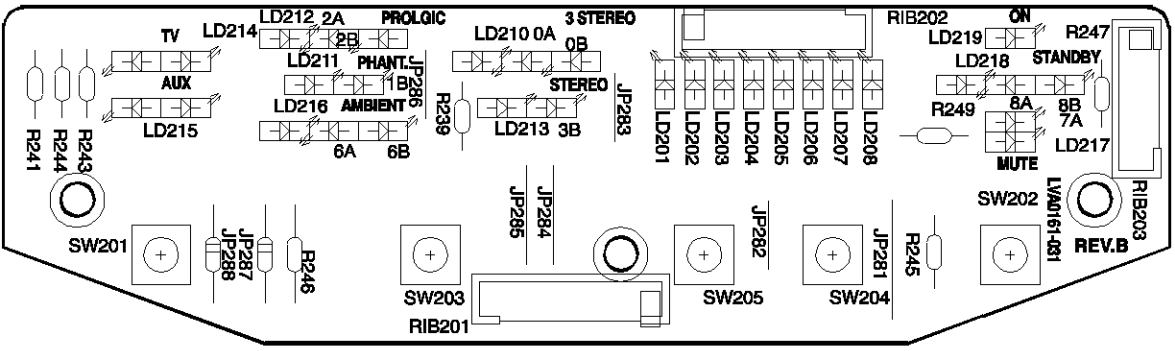
Sub300 Control Board P

Sub300 Connector PCB

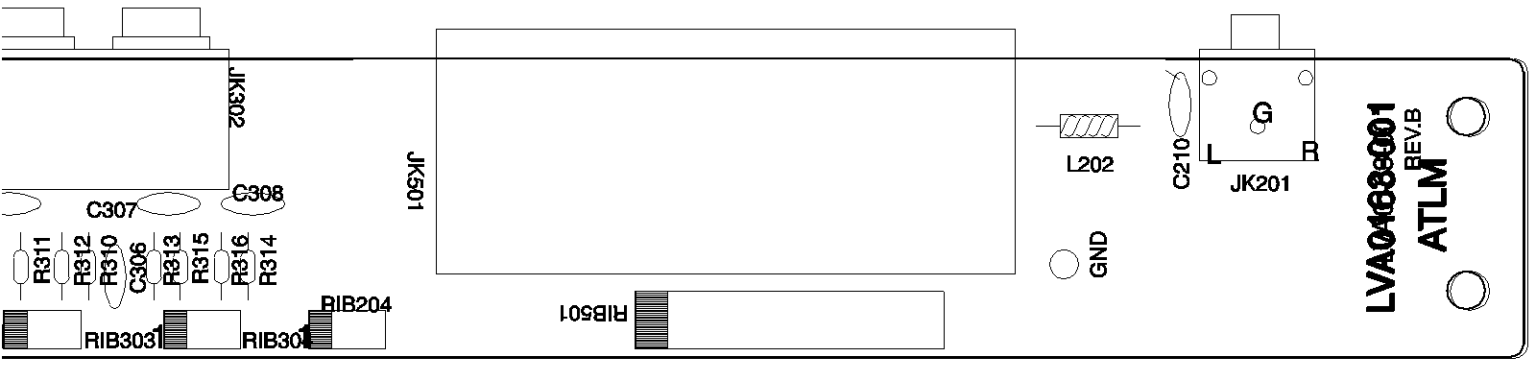
ER AMP, CONTROL & CONNECTOR PCB'S



Sub300 Control Board PCB

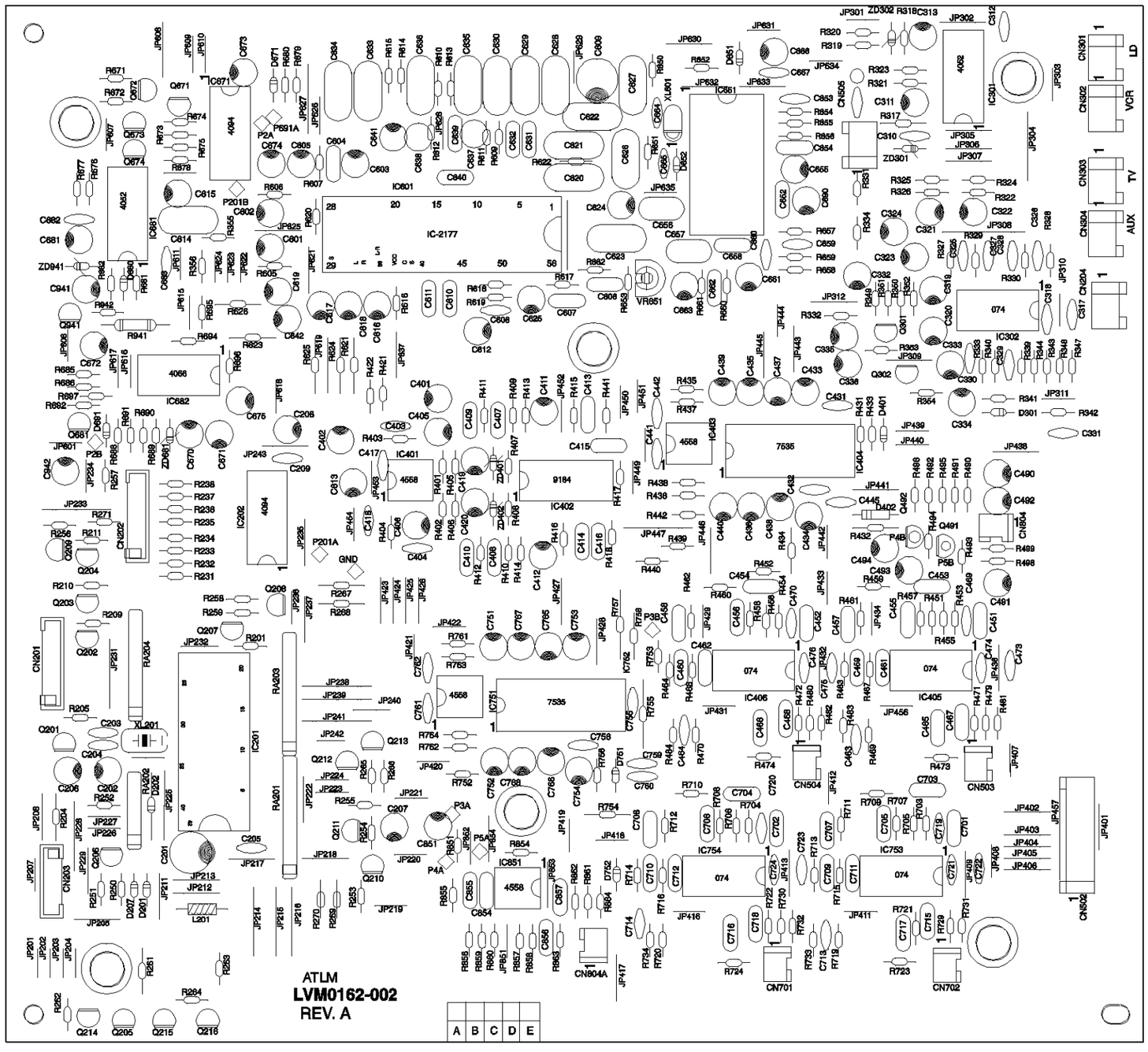


CB

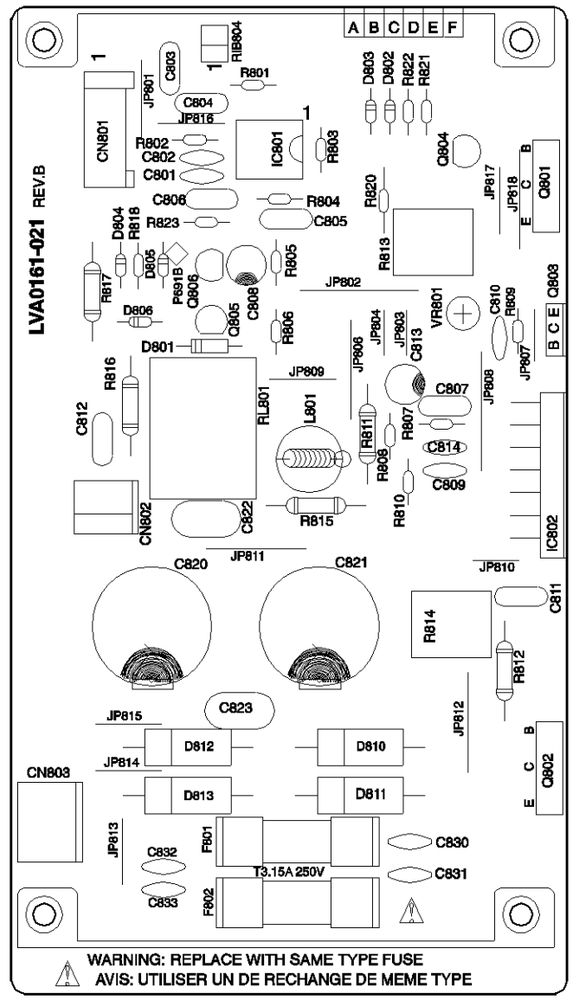


SUB300 MAIN & SUBWOOFER AMP PCB s

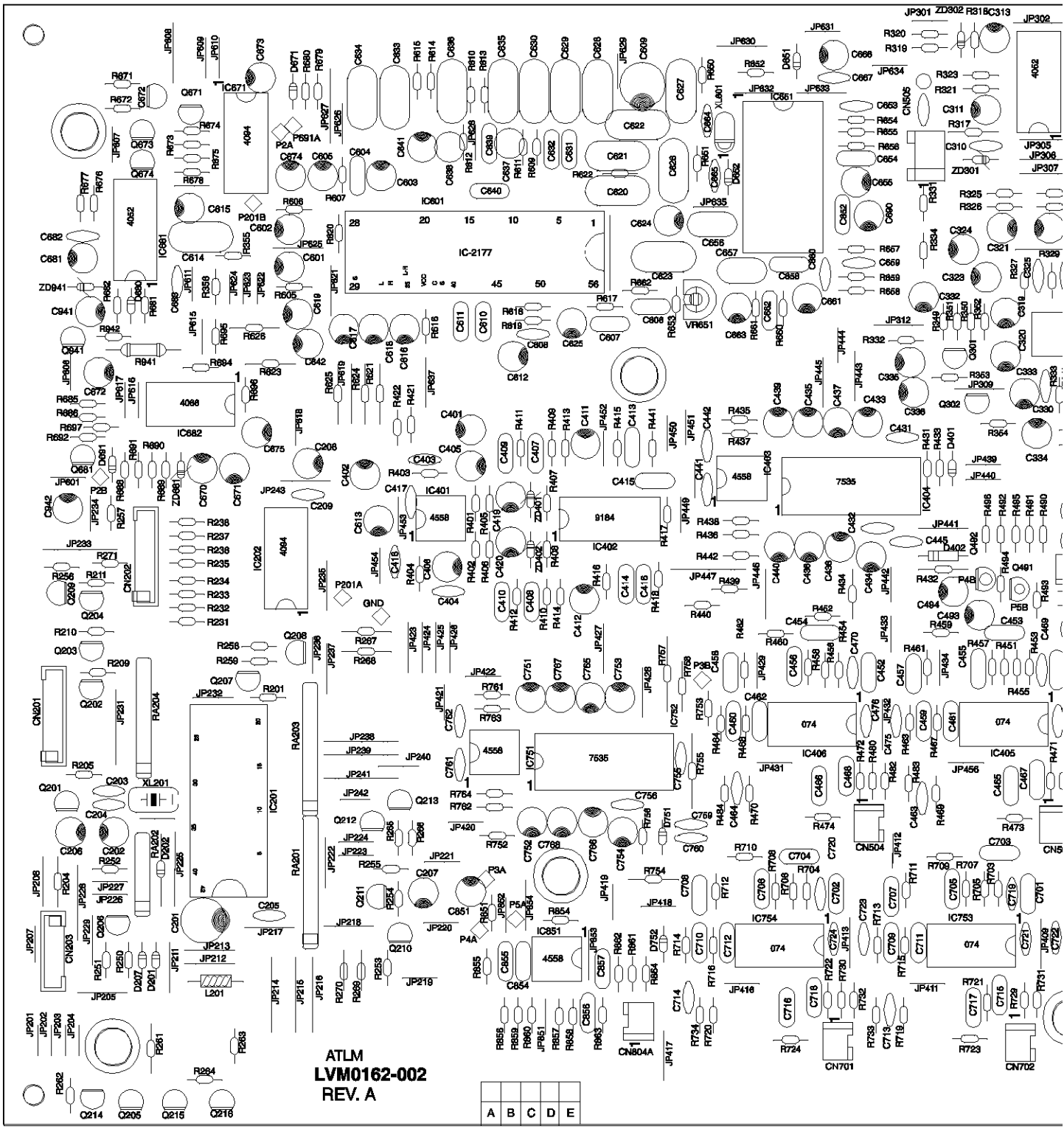
For both the Sub300 & Sub300B Dolby ProLogic PCB



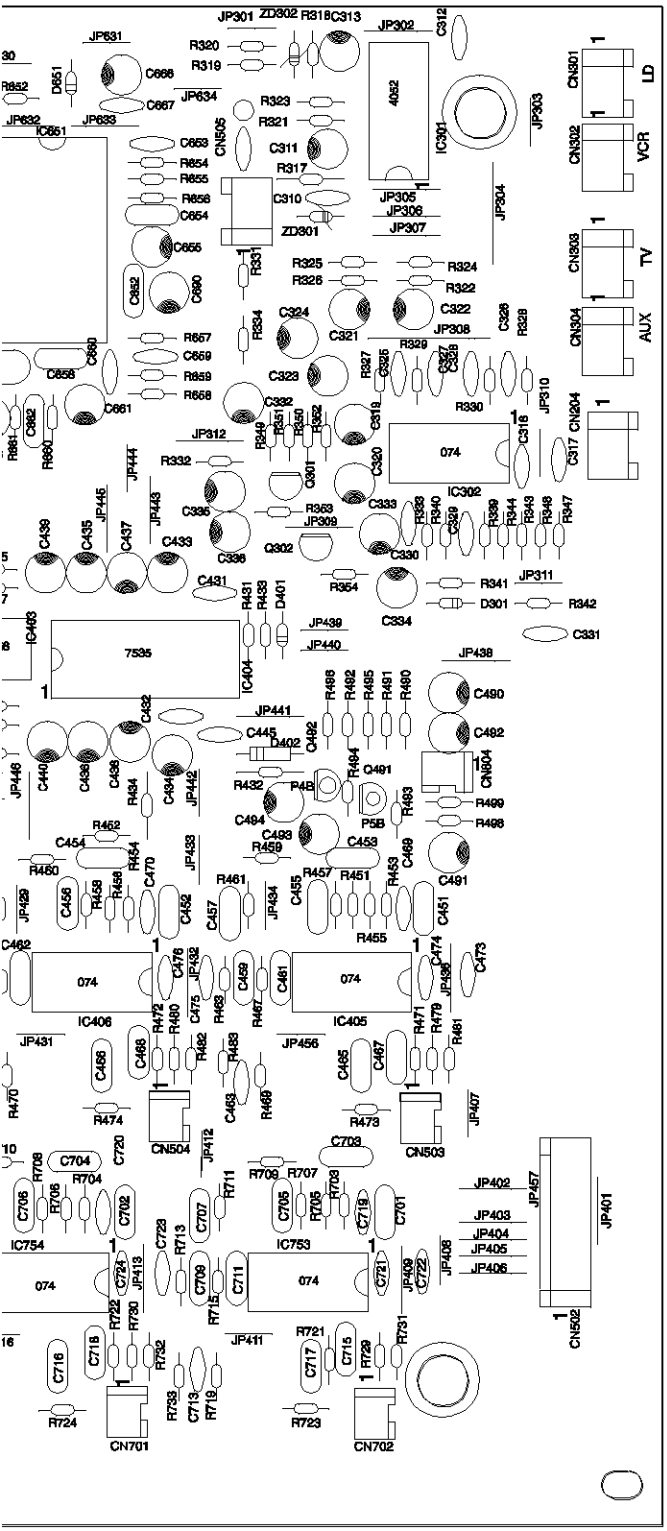
Sub300 Subwoofer Amplifier PCB



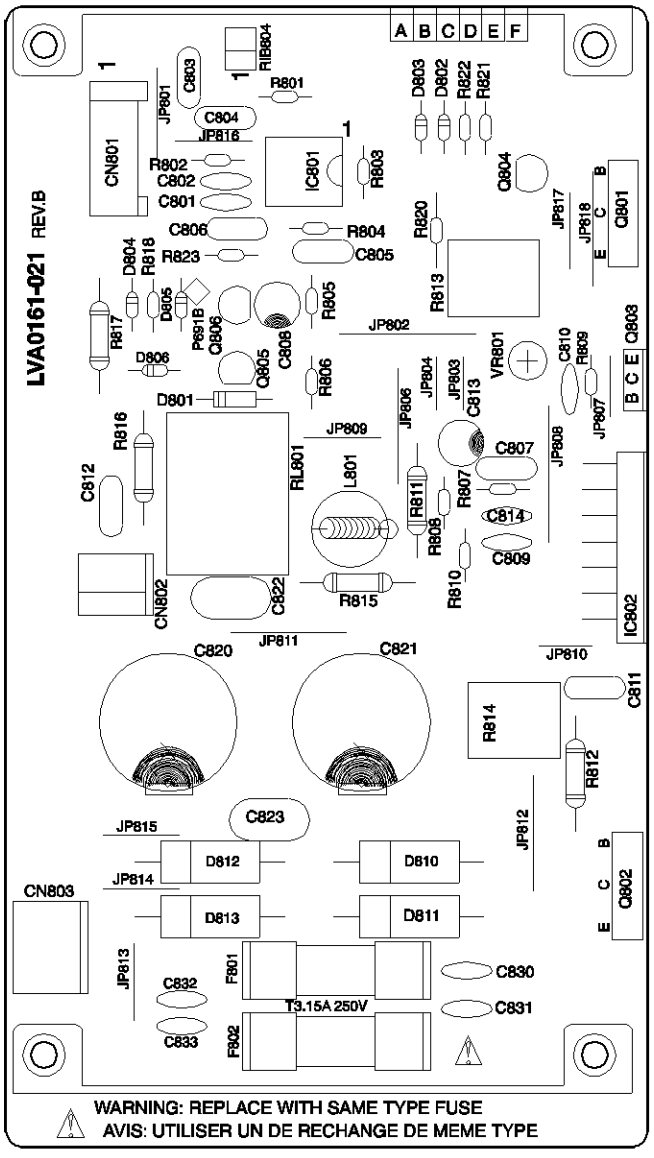
For both the Sub300 & Sub300B Dolby ProLogic PCB



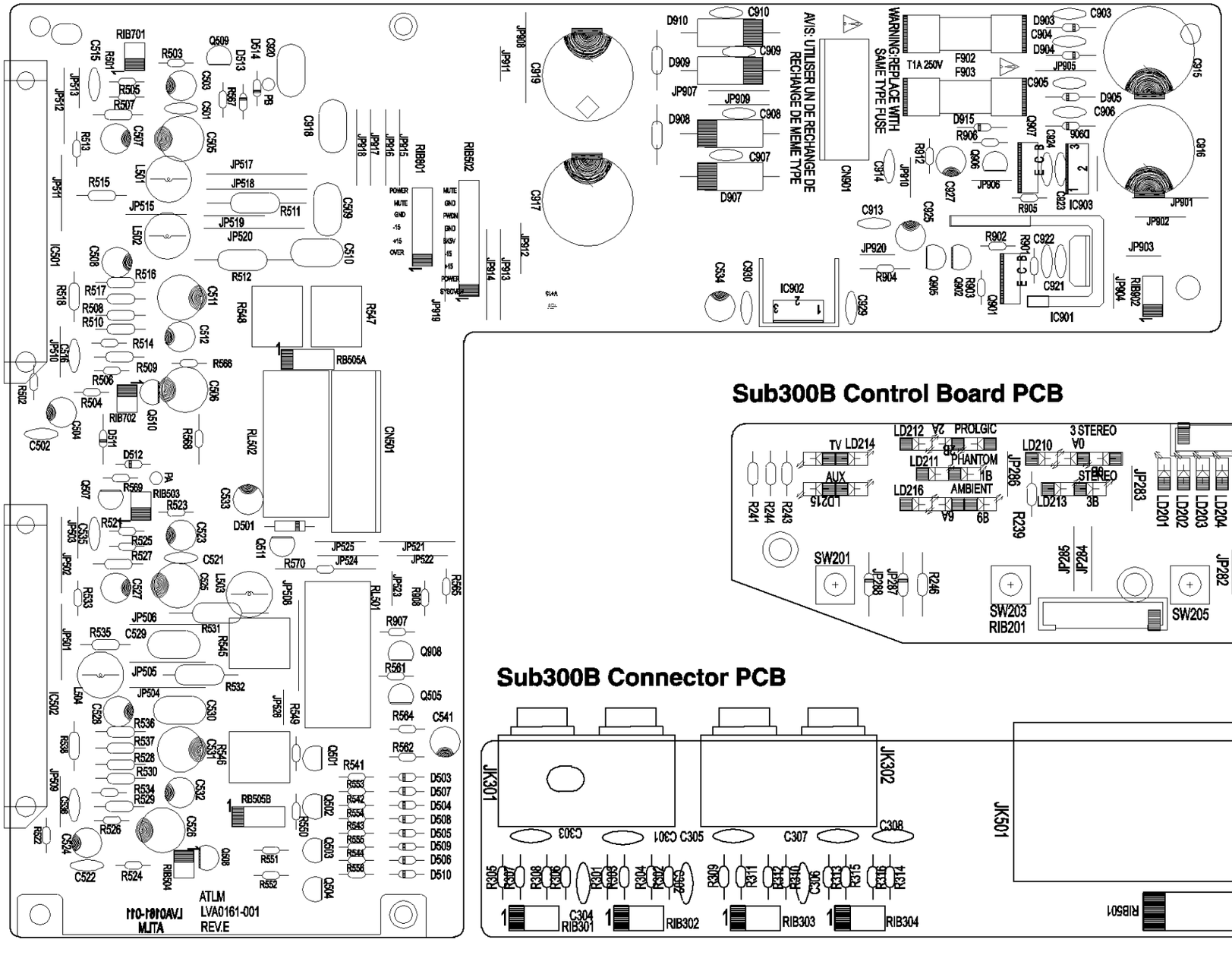
) MAIN & SUBWOOFER AMP PCB's



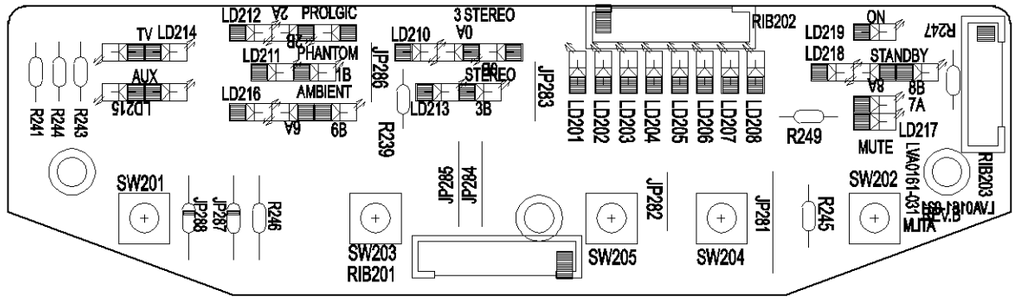
Sub300 Subwoofer Amplifier PCB



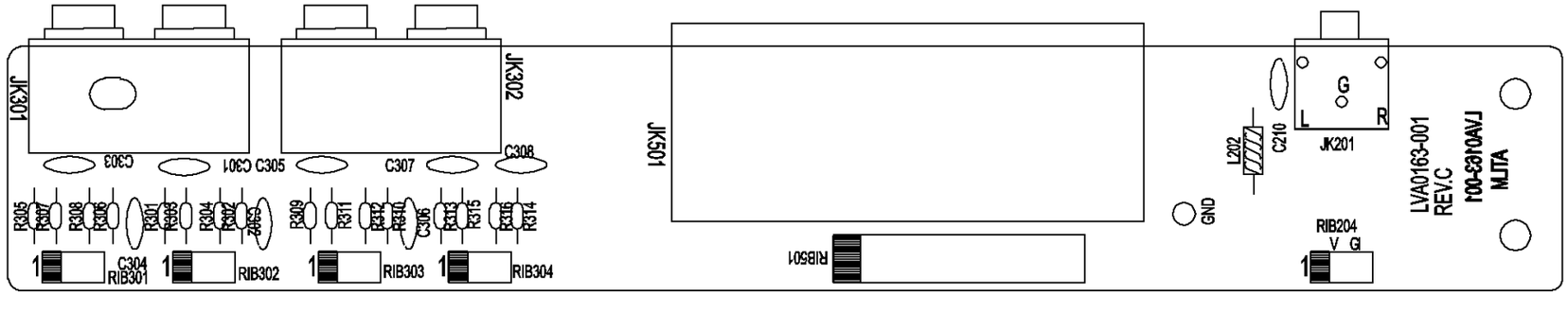
Sub300B Power Amplifier PCB



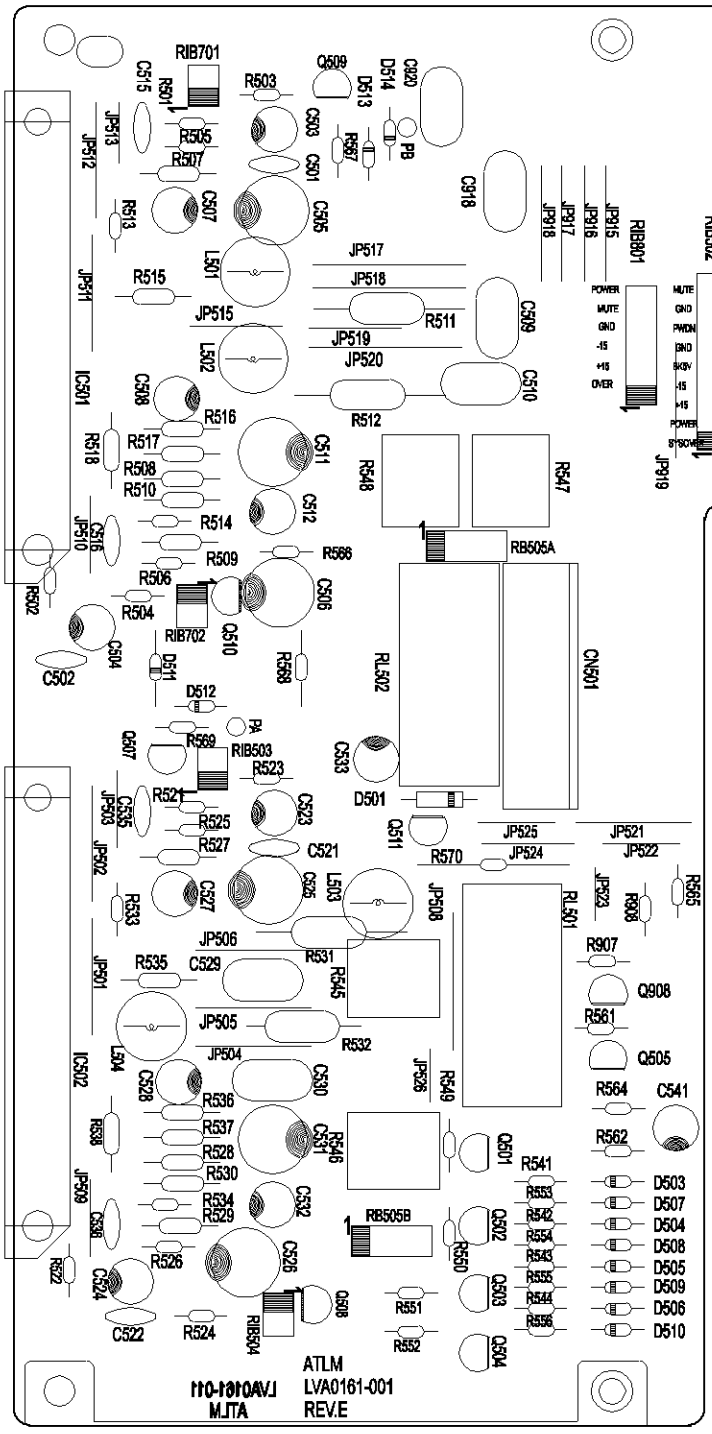
Sub300B Control Board PCB



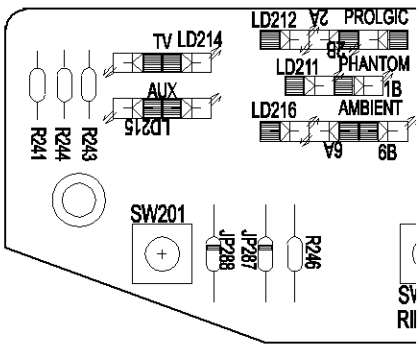
Sub300B Connector PCB



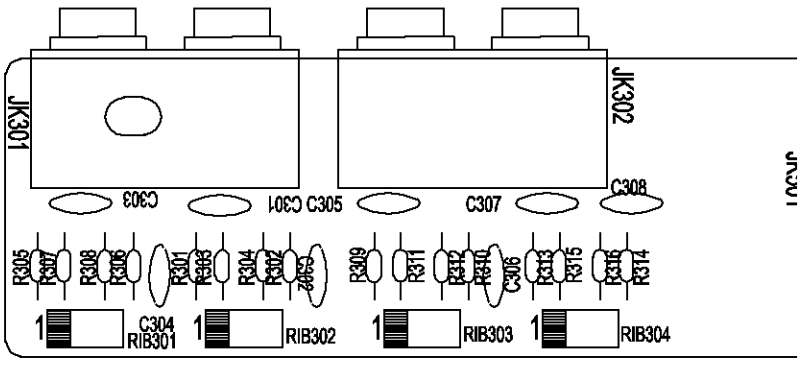
Sub300B Power Amplifier PCB



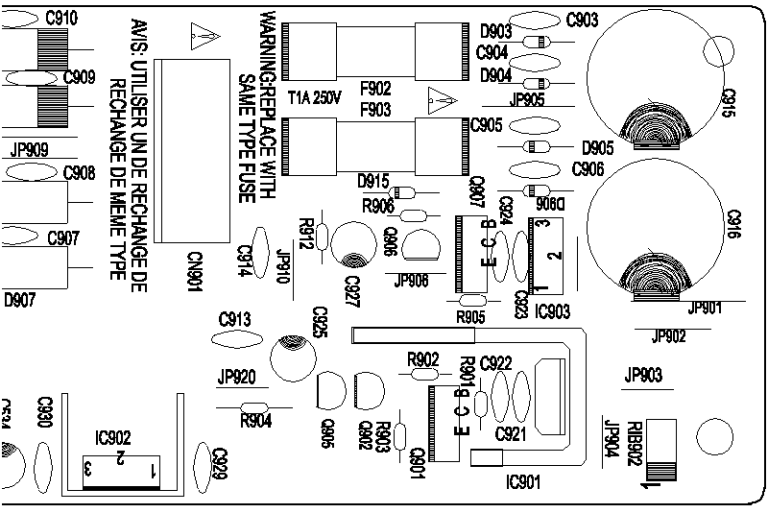
Sub300B Control Board



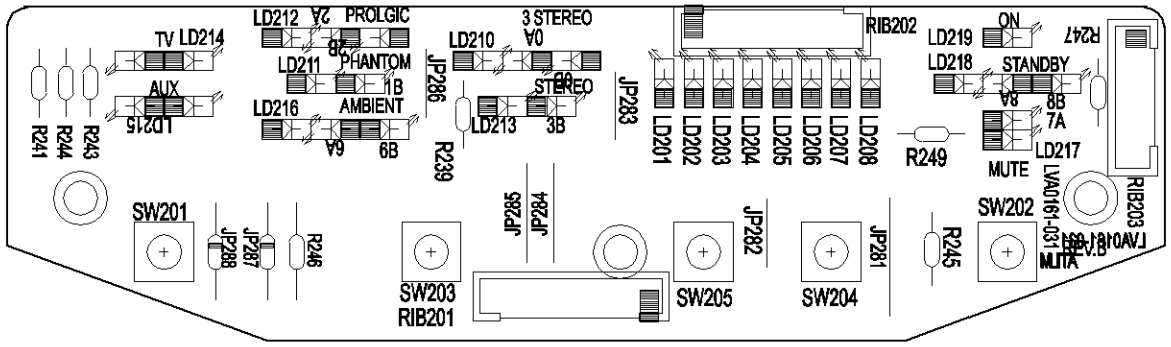
Sub300B Connector PCB



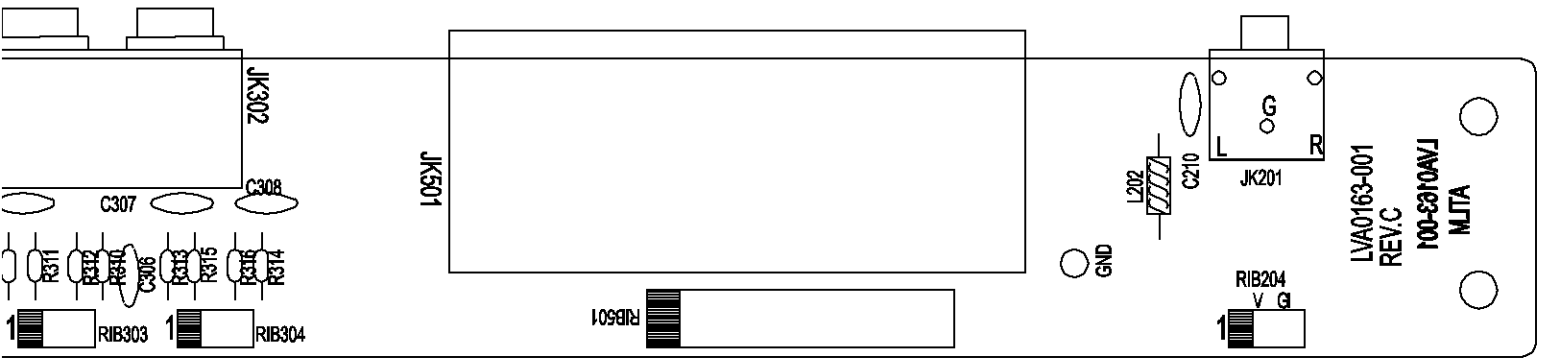
ER AMP, CONTROL & CONNECTOR PCB'S



Sub300B Control Board PCB



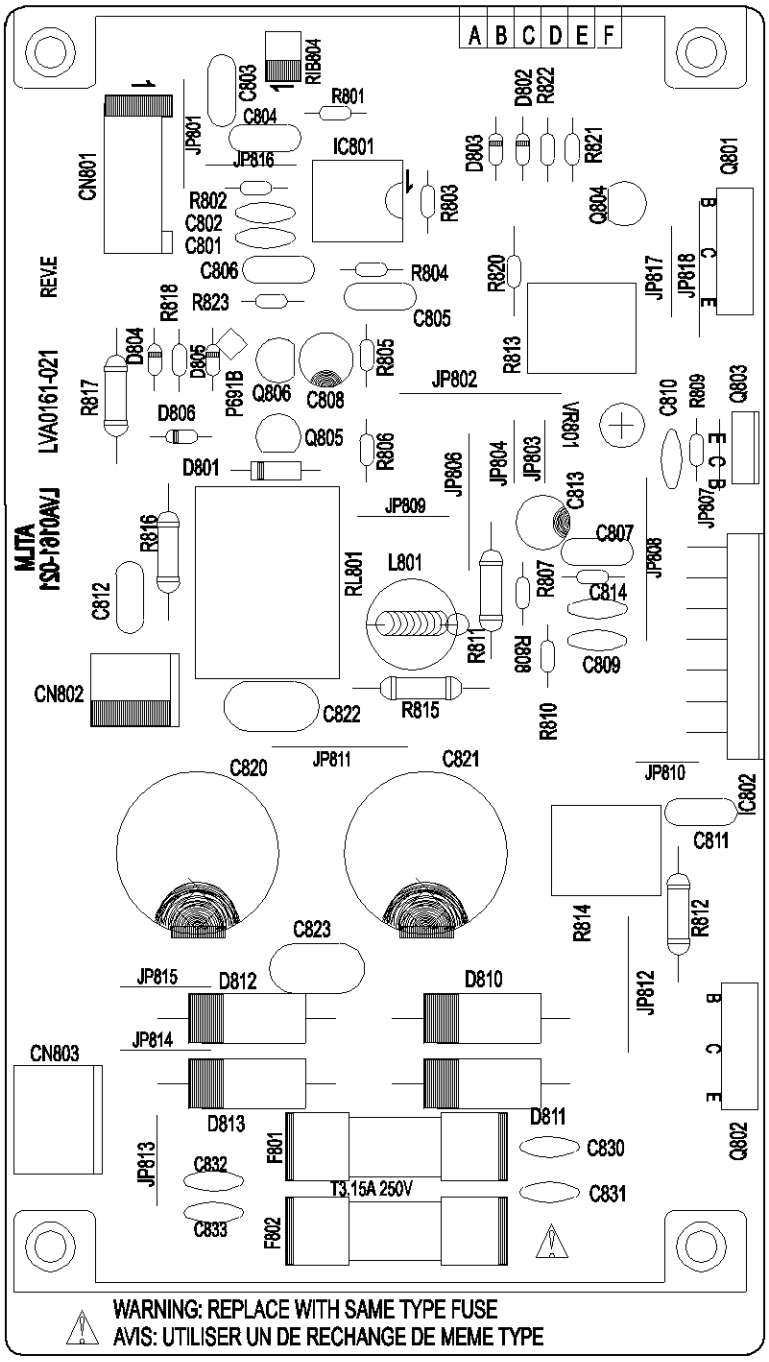
r PCB



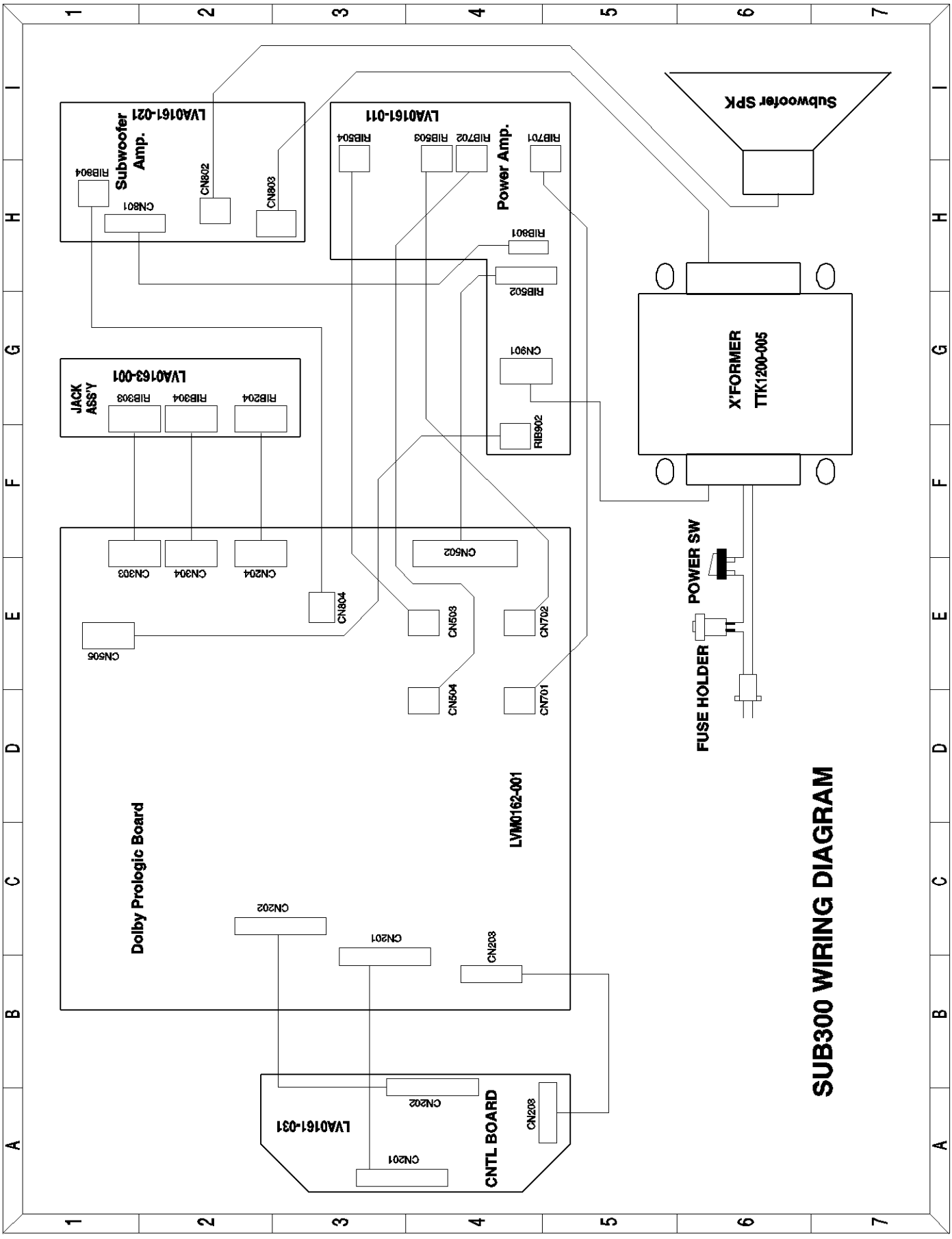
SUB300B PAGE 30 - 2 of 2

SUB300B SUBWOOFER AMPLIFIER PCB

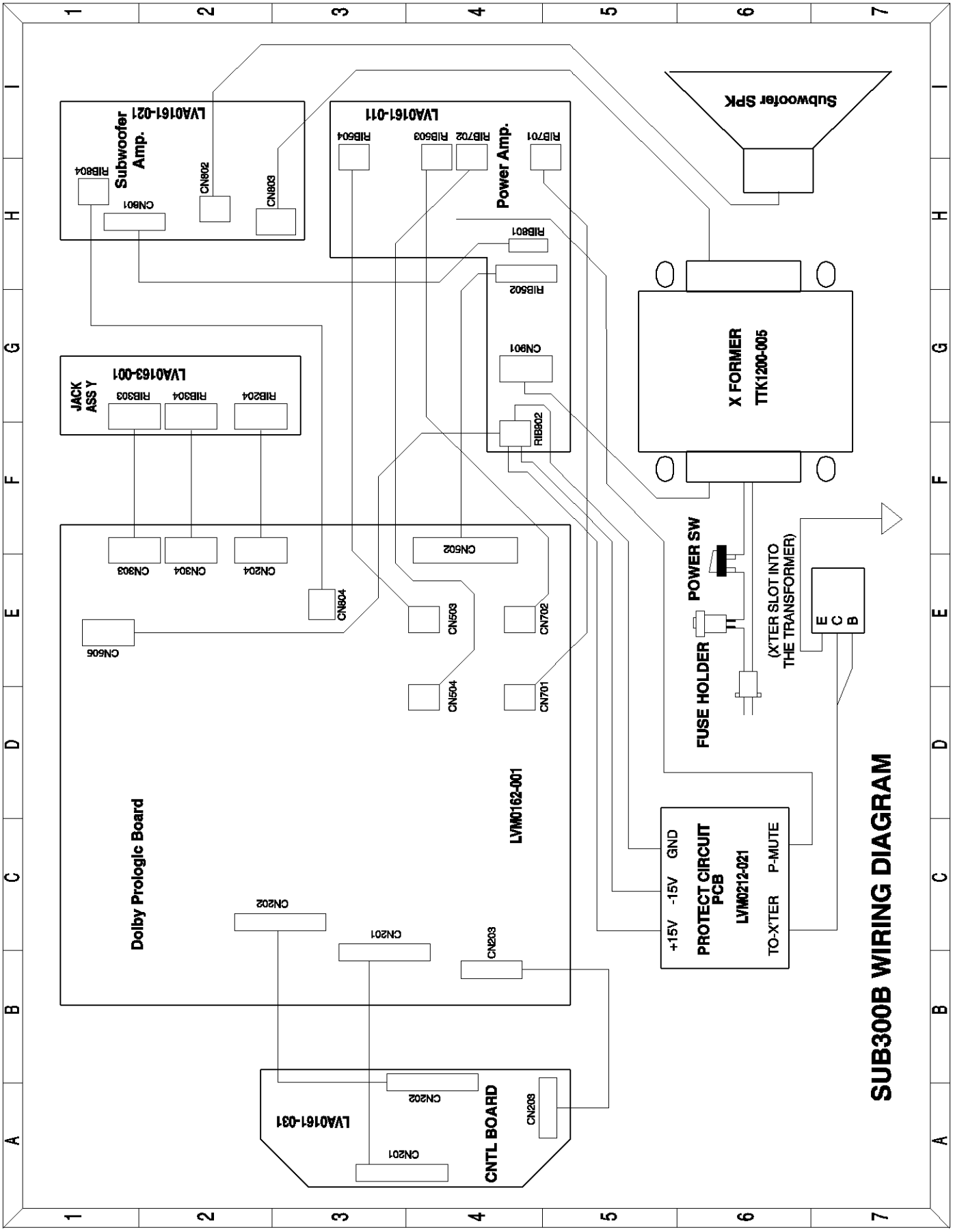
Sub300B Subwoofer Amplifier PCB



SUB300 WIRING DIAGRAM

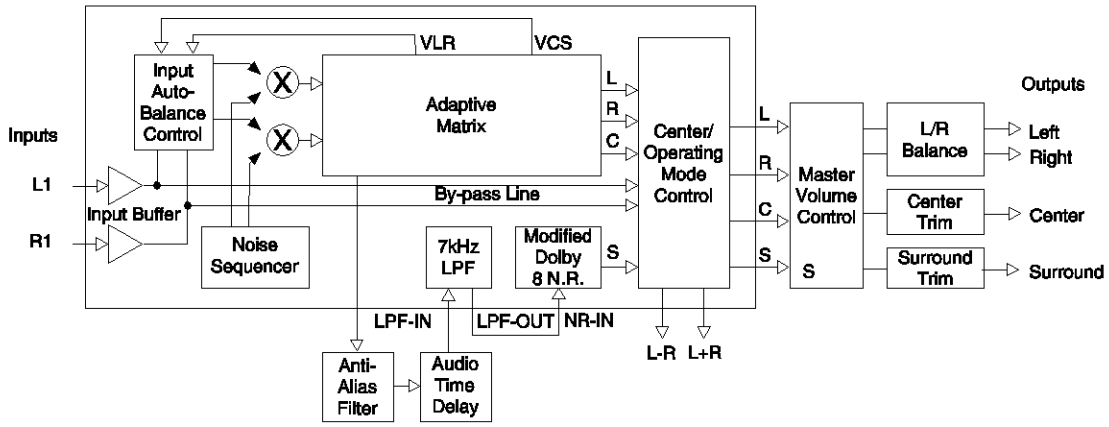


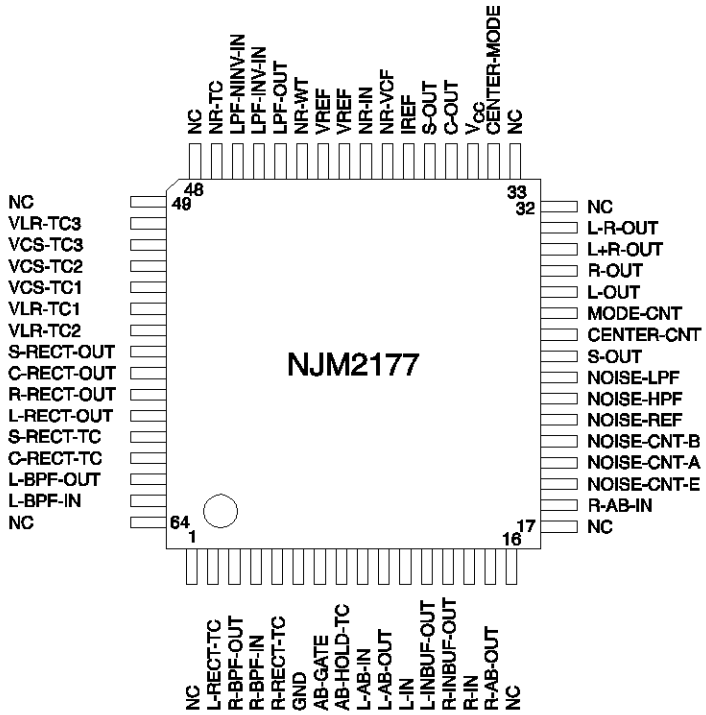
SUB300B WIRING DIAGRAM



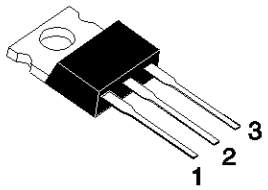
INTEGRATED CIRCUIT DIAGRAMS

IC601 - NJM2177A, DOLBY PRO LOGIC SOUND DECODER

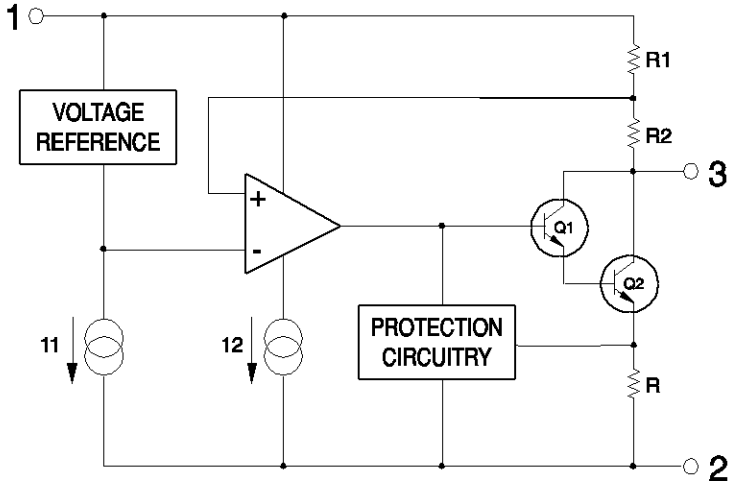




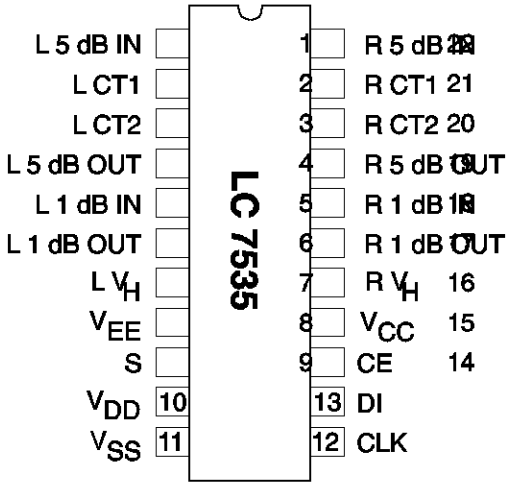
IC903 - 7915, -9V REGULATOR

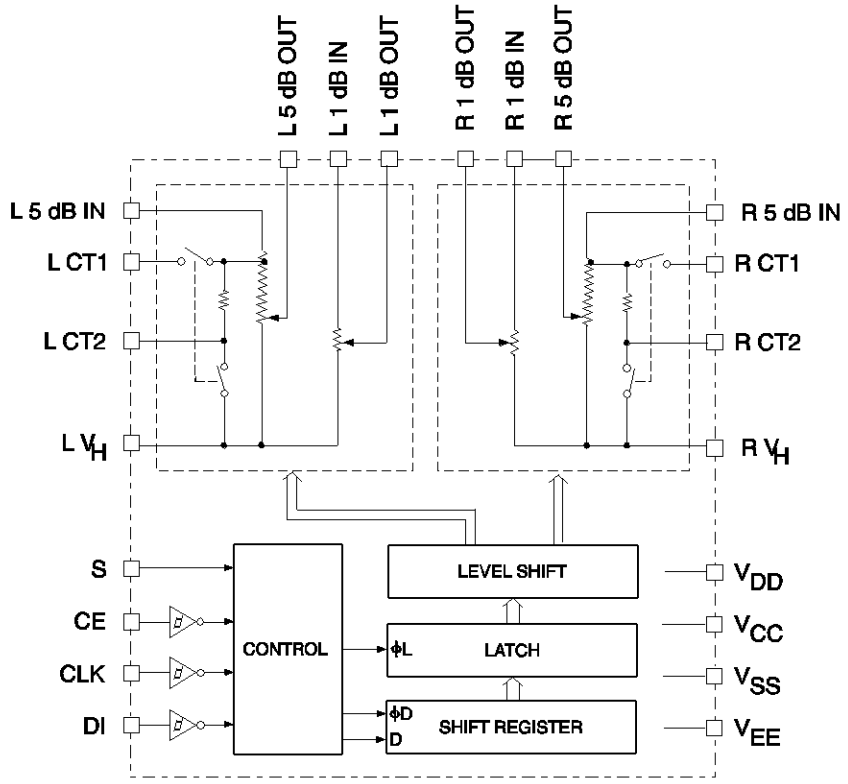


1: GND, 2: INPUT, 3: OUTPUT

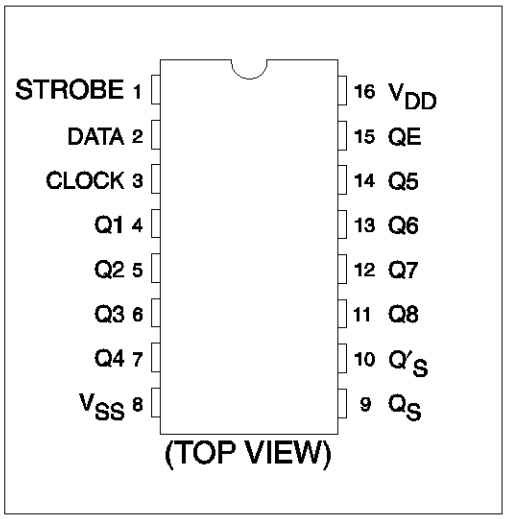


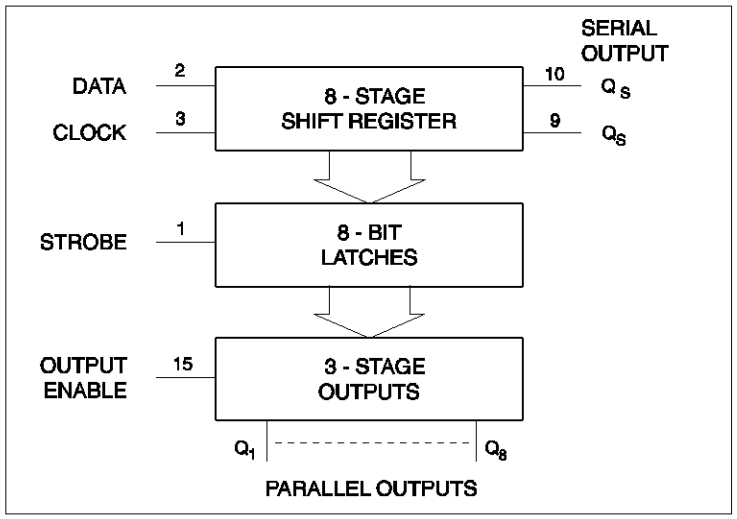
IC404, IC752 - LC7535
ELECTRONIC VOLUME CONTROL



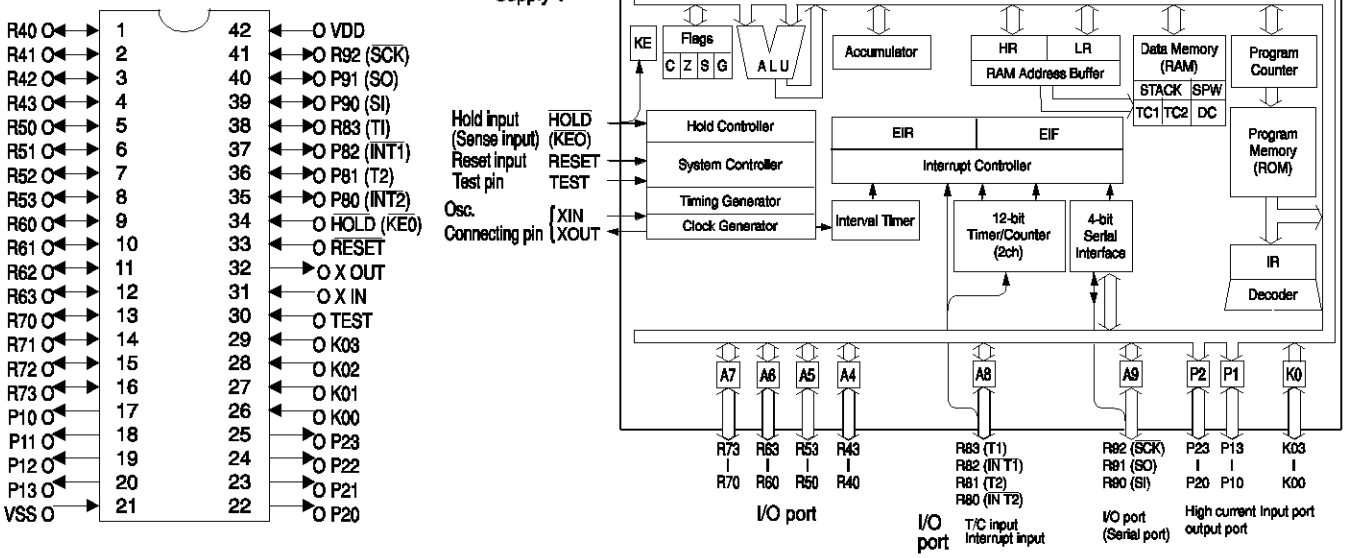


IC202, IC671 - TC4094BP, 8 BIT SHIFT REGISTER

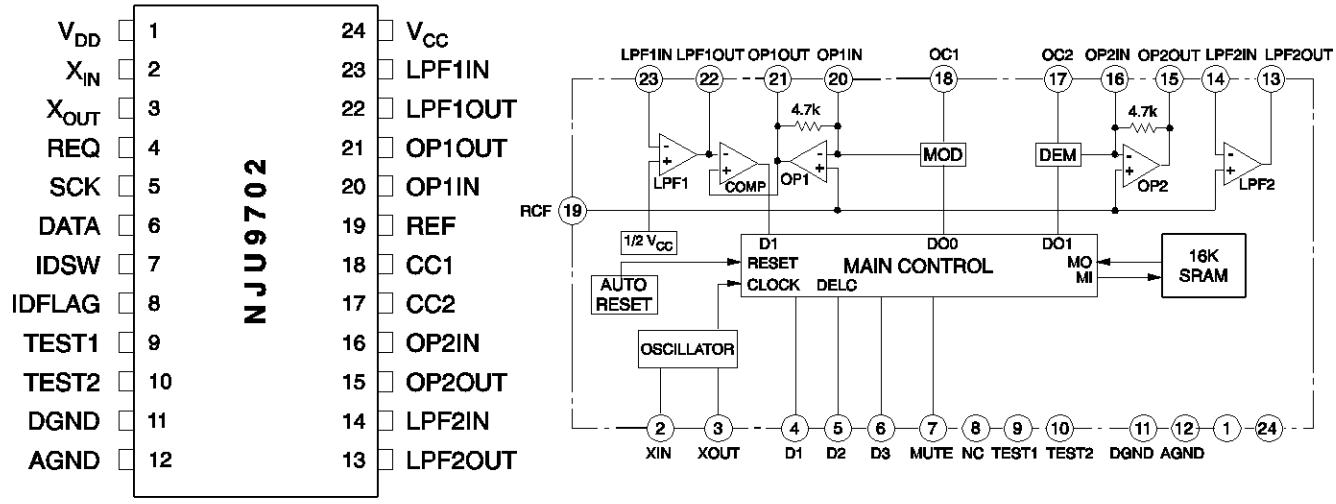




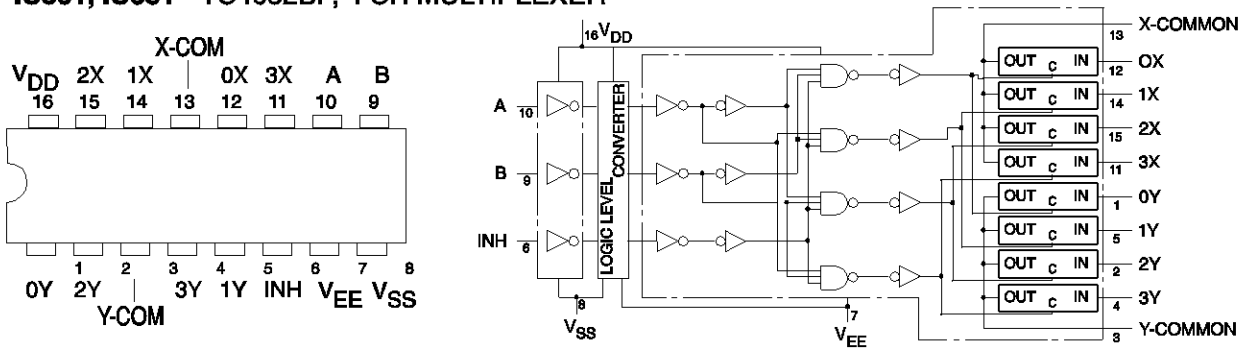
IC201 - TMP47CH400, MICROPROCESSOR



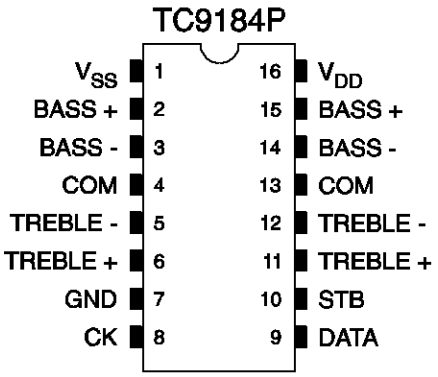
IC651 - NJU9702D, DELAY



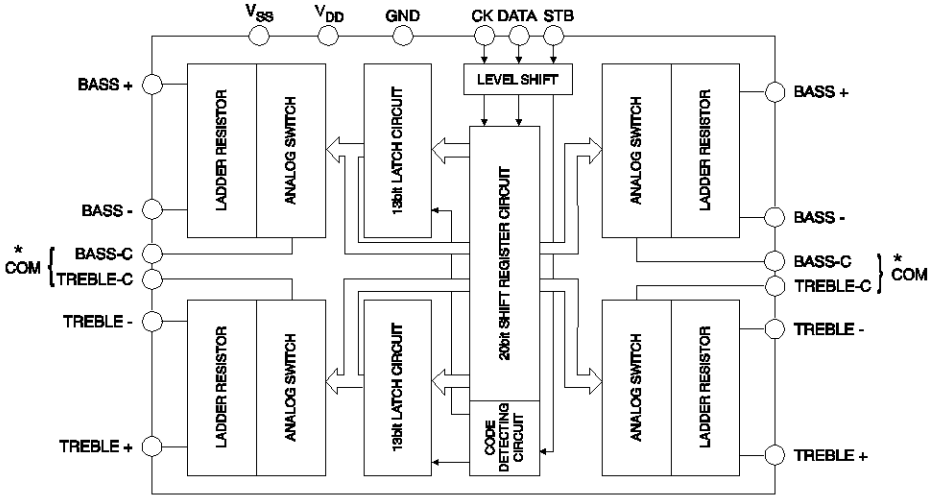
IC301, IC681 - TC4052BP, 4 CH MULTIPLEXER



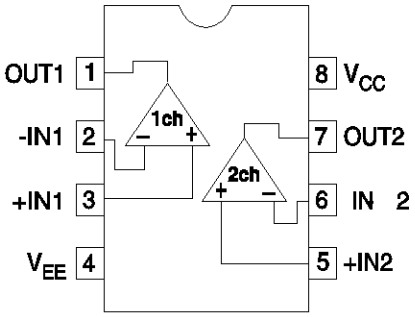
IC402 - TC9184P
BASS/TREBLE CONTROL

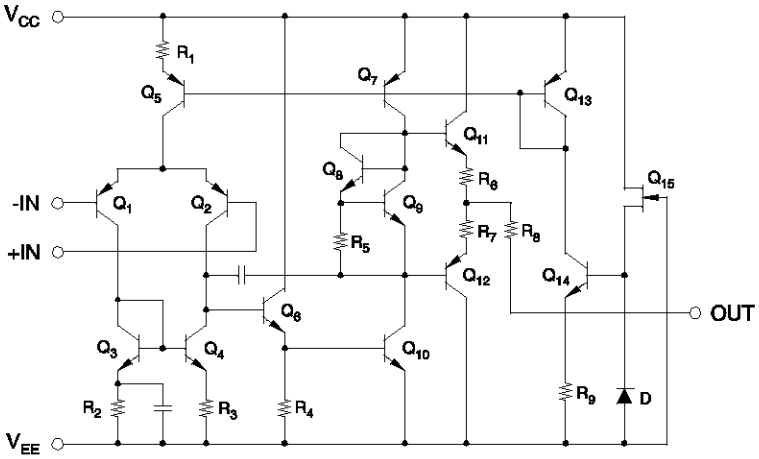


BLOCK DIAGRAM
TC9194P

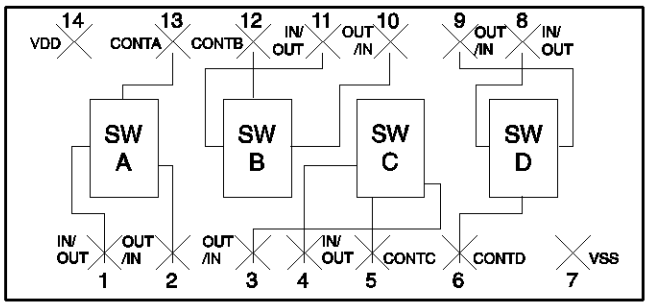


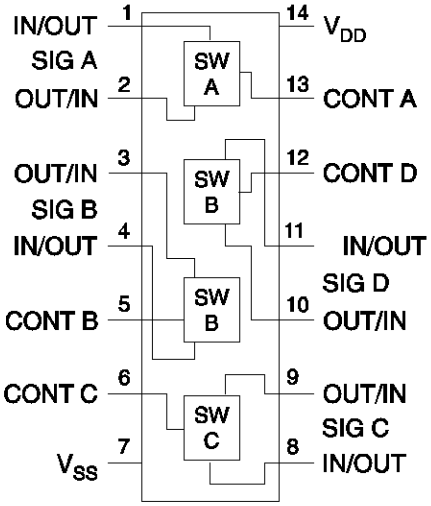
IC1, 401, 403, 751, 801, 851
JRC4558D, OP-AMP



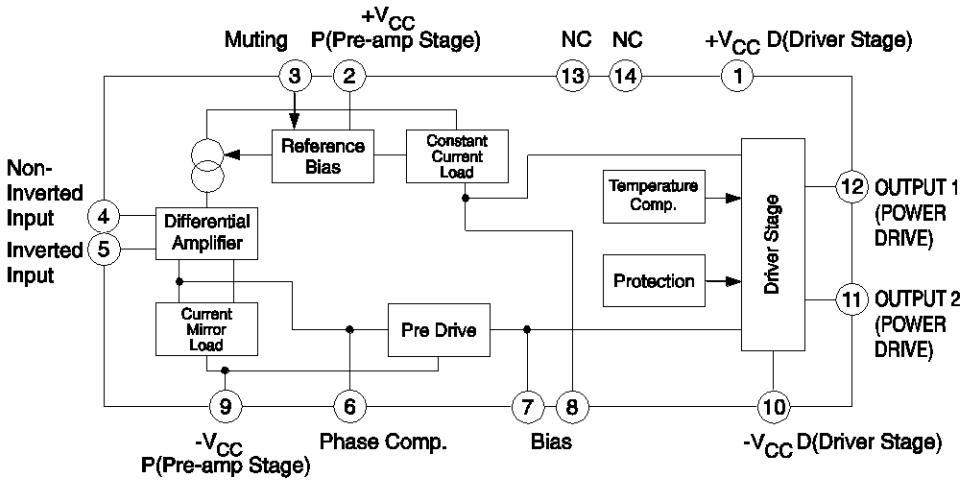


IC682 - MC14066BCP, QUAD SW/MULTIPLEXER

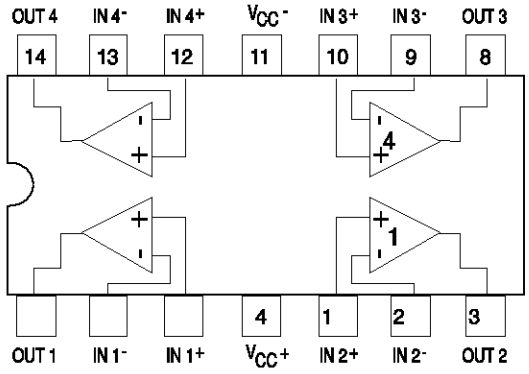


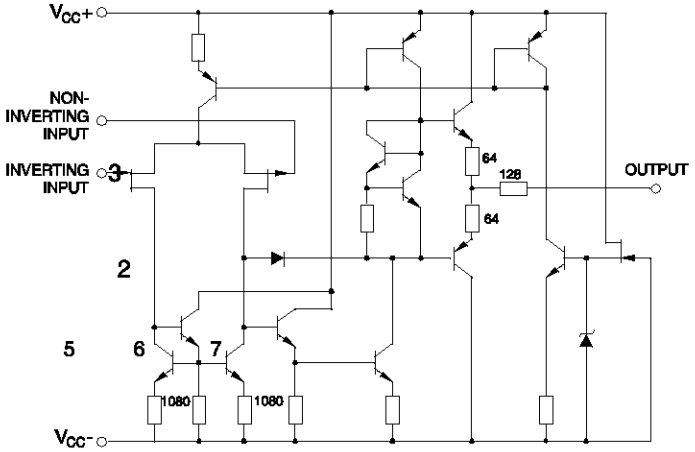


IC802 - UPC1298V, POWER AMP DRIVER

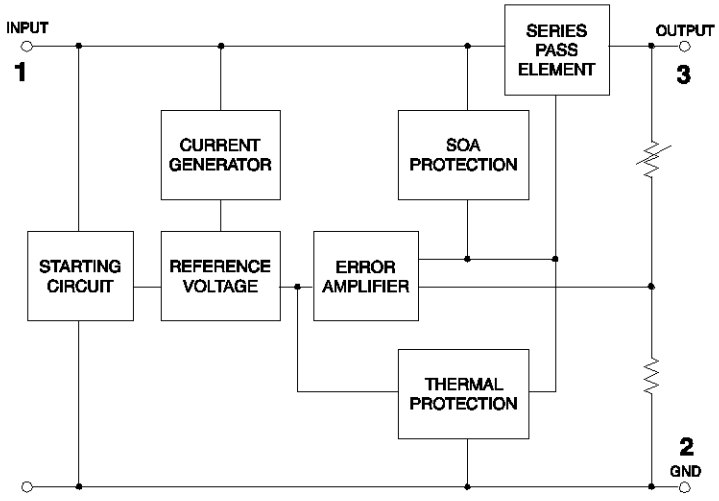


IC302, 405, 406, 753, 754
TL074CN, QUAD OP AMP

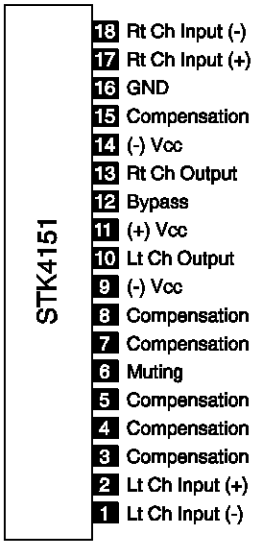




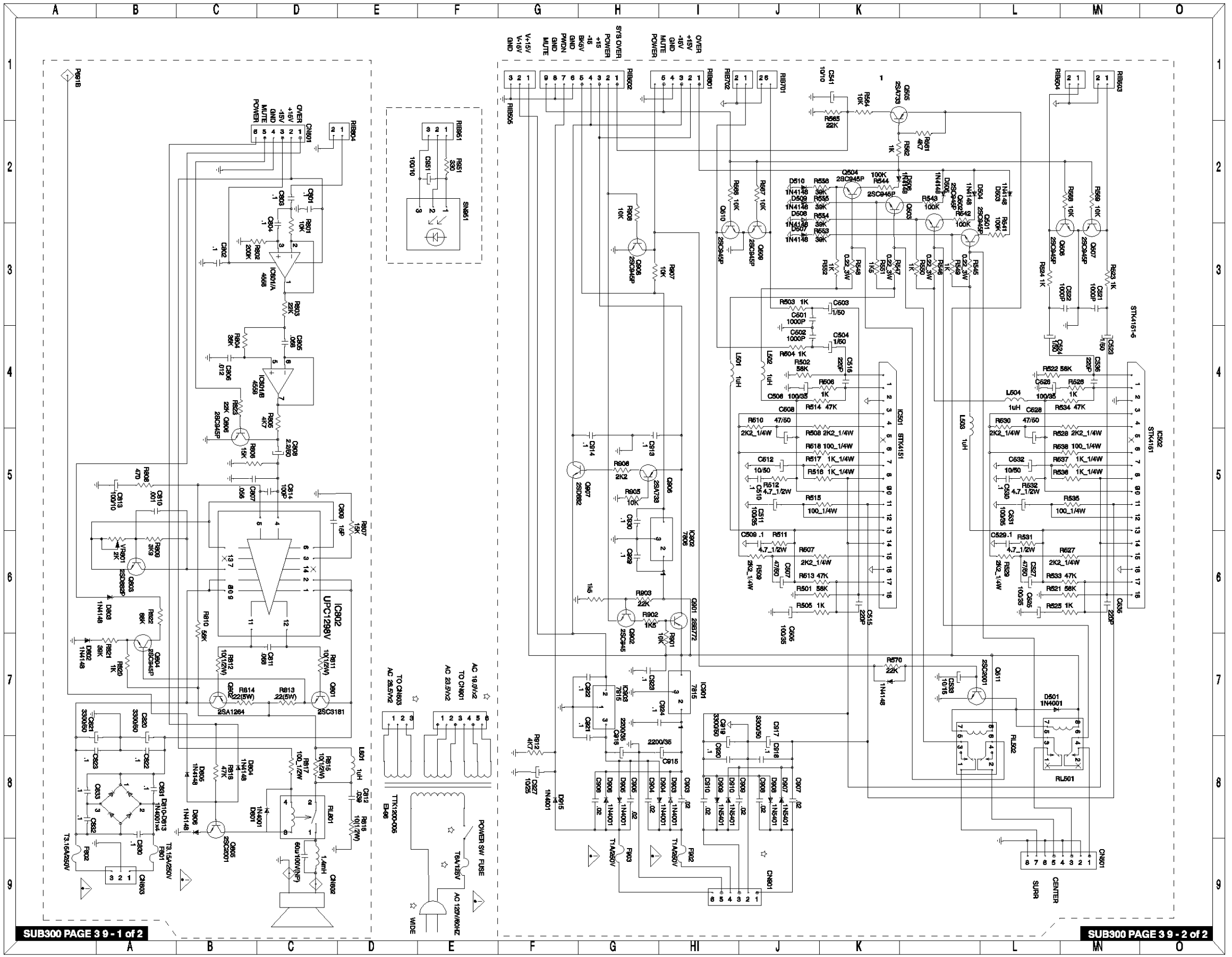
IC901 - 7815 +15V REGULATOR **(or)**
IC902 - MC7806ACT +6V REGULATOR



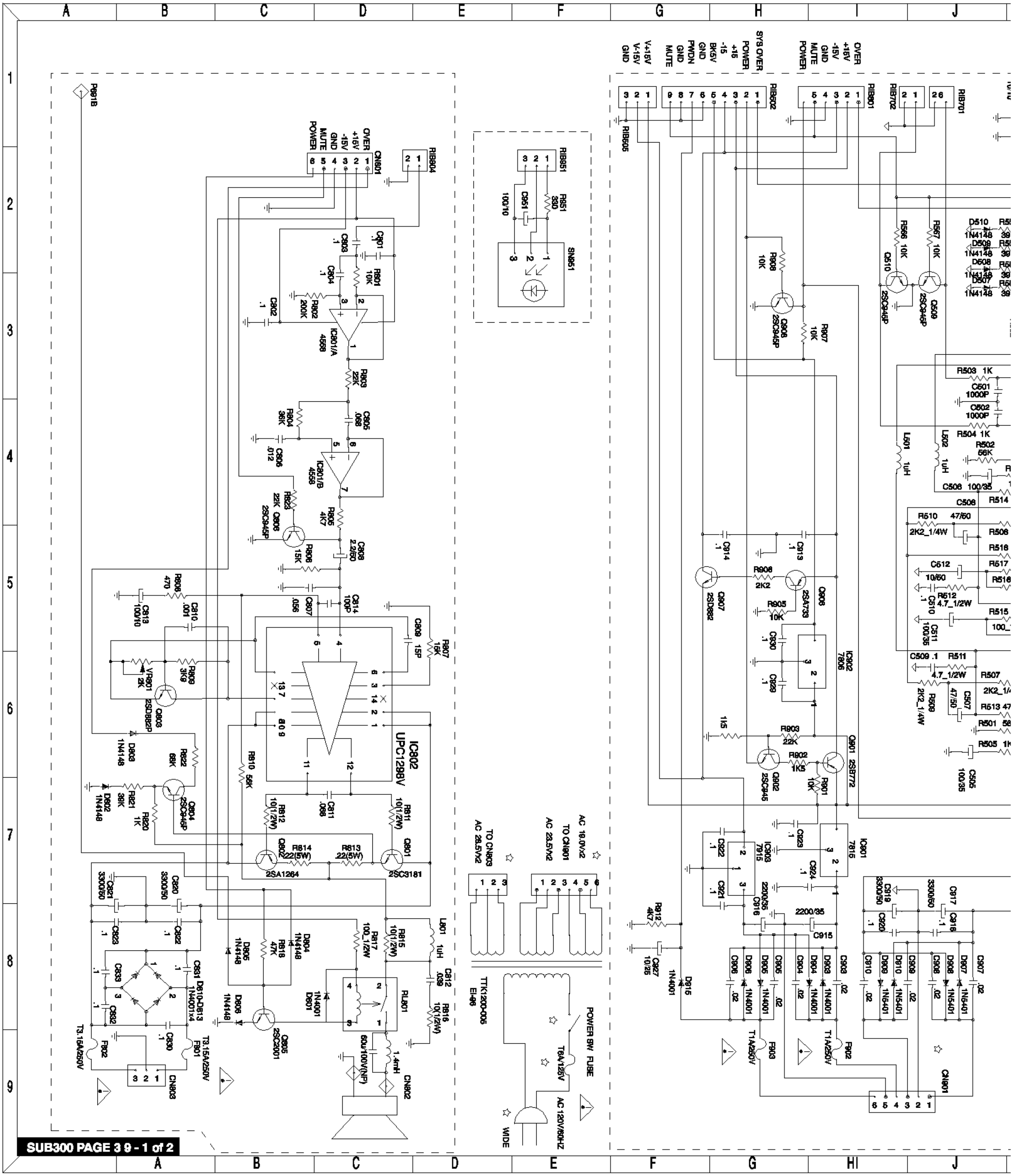
IC501, 502 - STK4151
POWER AMP



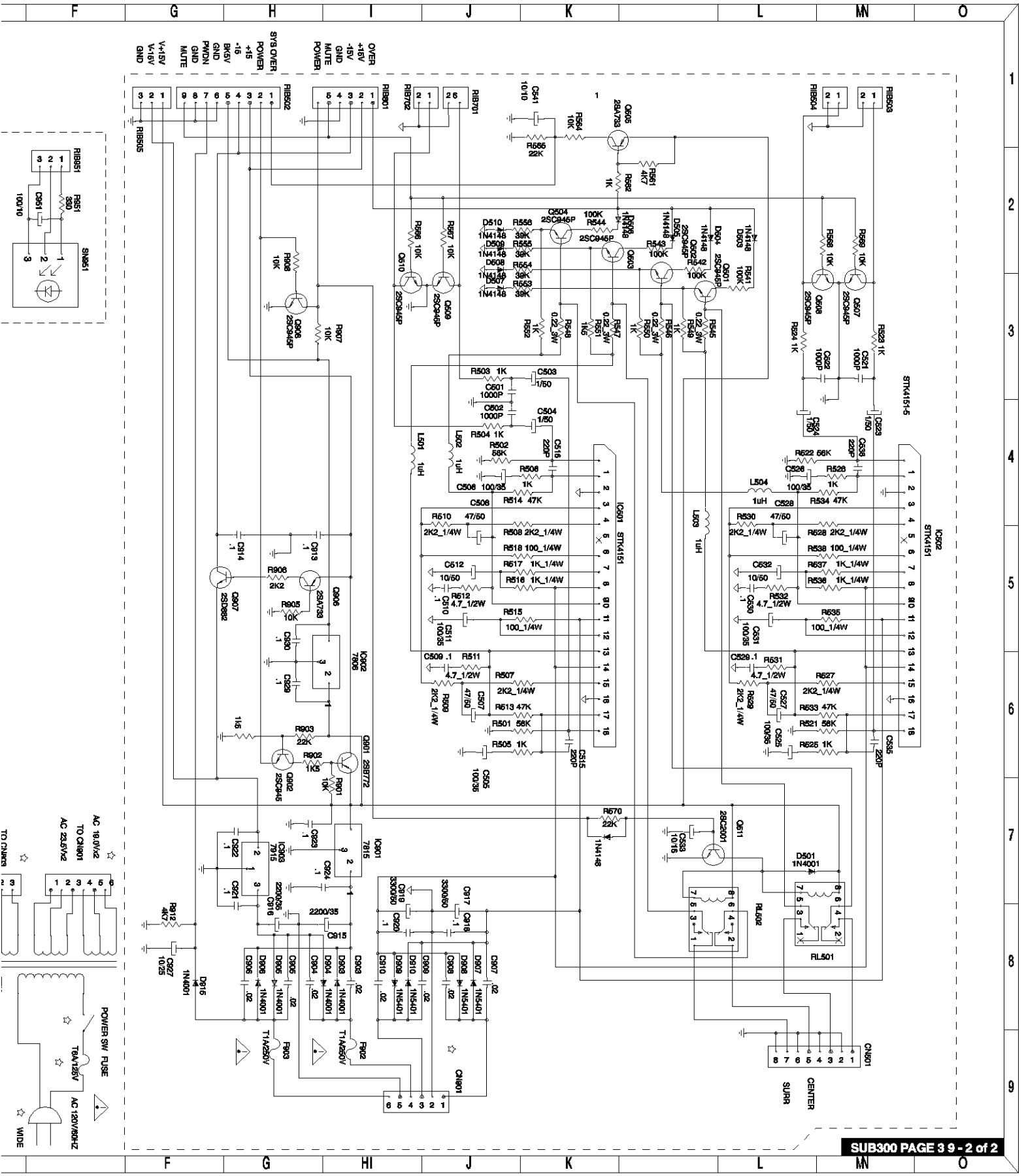
SUB300 SCHEMATIC DIAGRAM 1



SUB300 SCHEMATIC DIAGRAM 1


A B C D E F G H I J
1 2 3 4 5 6 7 8 9
P801B
CN801
OVER
+15V
-15V
GND
MUTE
POWER
RIB804
C801 .1
C803 .1
C804 .1
R801 10K
R802 200K
C802 .1
IC801/A 4558
R803 22K
R804 36K
C805 .068
C806 .012
IC801/B 4558
R823 22K
Q806 2SC945P
R805 4K7
R806 15K
C808 2.2/50
R808 470
C813 100/10
C810 .001
C807 .056
C814 100P
C809 15P
R807 15K
VR801 2K
R809 3K9
Q803 2SD882P
IC802 UPC1298V
D803 1N4148
R822 68K
D802 1N4148
R821 39K
R820 1K
Q804 2SC945P
R810 56K
R812 10(1/2W)
C811 .068
R811 10(1/2W)
Q802 2SA1264
R814 .22(5W)
R813 .22(5W)
Q801 2SC3181
C821 3300/50
C820 3300/50
C823 .1
C822 .1
C833 .1
C831 .1
D810-D813 1N4001x4
C832 .1
C830 .1
F802 T3.15A/250V
F801 T3.15A/250V
CN803
D805 1N4148
R818 47K
D804 1N4148
D806 1N4148
Q805 2SC2001
R817 100_1/2W
D801 1N4001
RL801
R815 10(1/2W)
L801 1uH
C812 .039
R816 10(1/2W)
60u/100V(NP)
1.4mH
CN802
RIB951
R951 330
C951 100/10
SN951
TO CN803 AC 28.5Vx2
TO CN901 AC 23.5Vx2 AC 19.0Vx2
TTK1200-006 EI-96
POWER SW FUSE
T6A/125V
AC 120V/60HZ
WIDE
GND V-15V V+15V
MUTE GND PWDN GND BK5V -15 +15 POWER SYS OVER
POWER MUTE GND -15V +15V OVER
RIB605
RIB602
RIB801
RIB702
RIB701
R908 10K
Q908 2SC945P
R907 10K
R566 10K
R567 10K
Q510 2SC945P
Q509 2SC945P
D510 1N4148
D509 1N4148
D508 1N4148
D507 1N4148
R503 1K
C501 1000P
C502 1000P
R504 1K
L501 1uH
L502 1uH
R502 56K
C506 100/35
C508
R514
R510 47/50
2K2_1/4W
R508
R516
C512 10/50
R517
R518
C510 .1
R512 4.7_1/2W
R515
C511 100/35
C509 .1
R511 4.7_1/2W
R507 2K2_1/4W
R509 2K2_1/4W
C507 47/50
R513 47
R501 56
R505 1K
C505 100/35
C914 .1
C913 .1
Q907 2SD882
R906 2K2
Q906 2SA733
R905 10K
C930 .1
C929 .1
IC902 7806
1K5
R903 22K
Q902 2SC945
R902 1K5
Q901 2SB772
R901 10K
C922 .1
IC903 7915
C923 .1
IC901 7815
C924 .1
C921 .1
C916 2200/35
C915 2200/35
R912 4K7
C927 10/25
D915 1N4001
C906 .02
D906 1N4001
D905 1N4001
C905 .02
C904 .02
D904 1N4001
D903 1N4001
C903 .02
C910 .02
D909 1N5401
D910 1N5401
C909 .02
C908 .02
D908 1N5401
D907 1N5401
C907 .02
C919 3300/50
C917 3300/50
C920 .1
C918 .1
F903 T1A/250V
F902 T1A/250V
CN901

SUB300 SCHEMATIC DIAGRAM 1



SUB300 SCHEMATIC DIAGRAM 2

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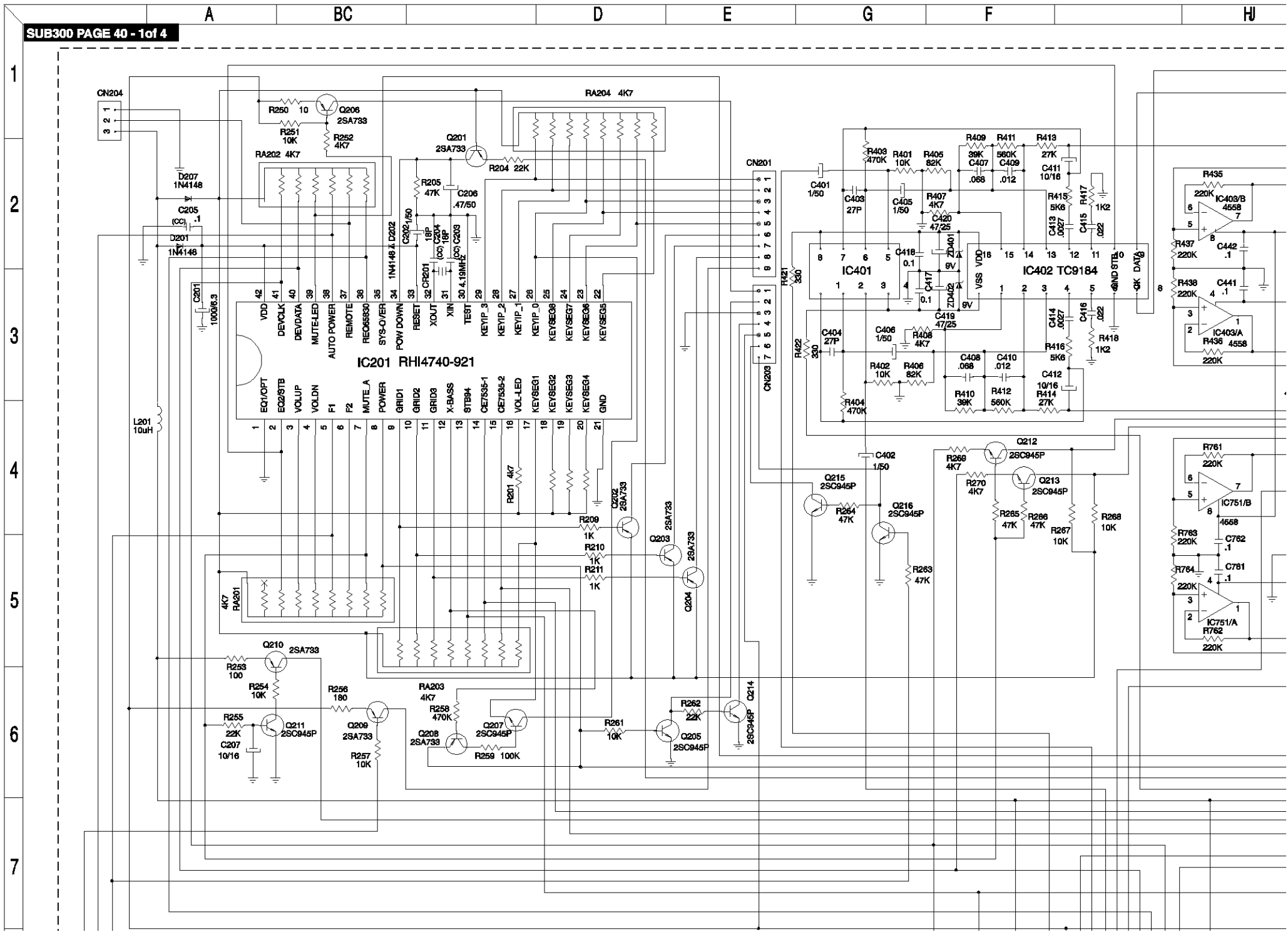
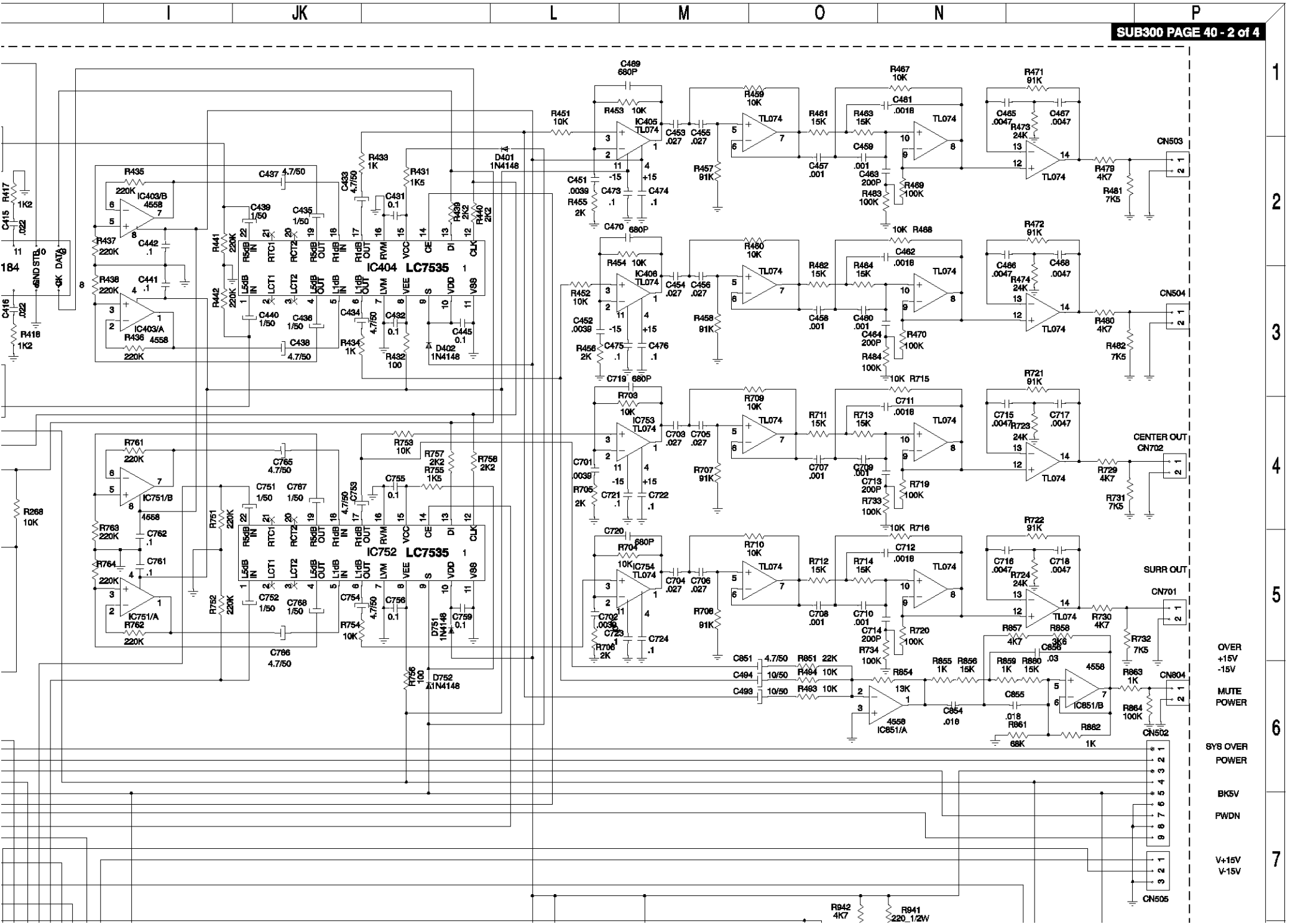
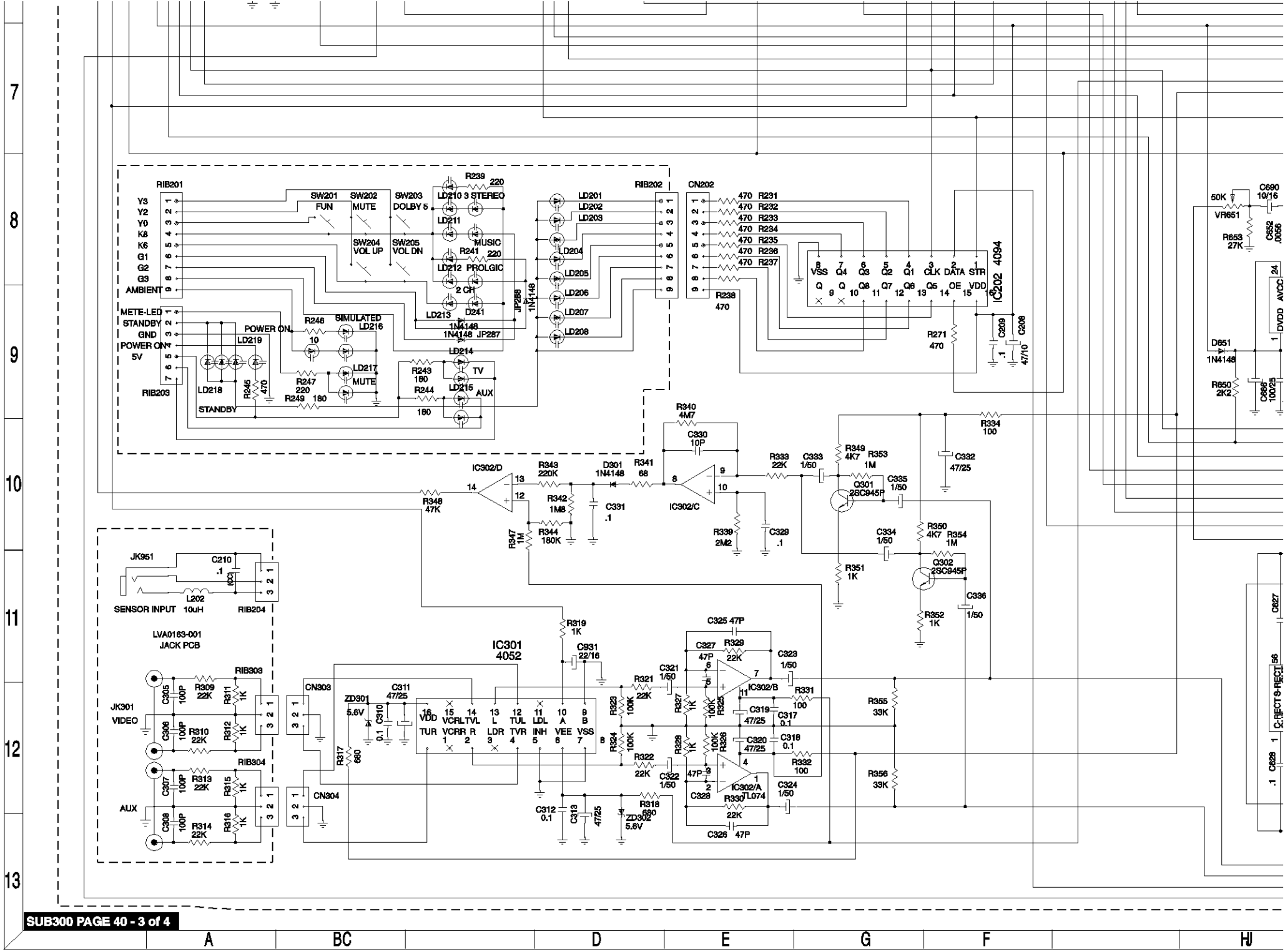
SUB300 PAGE 4 0 - 4 of 4

SUB300 PAGE 40 - 1of 4

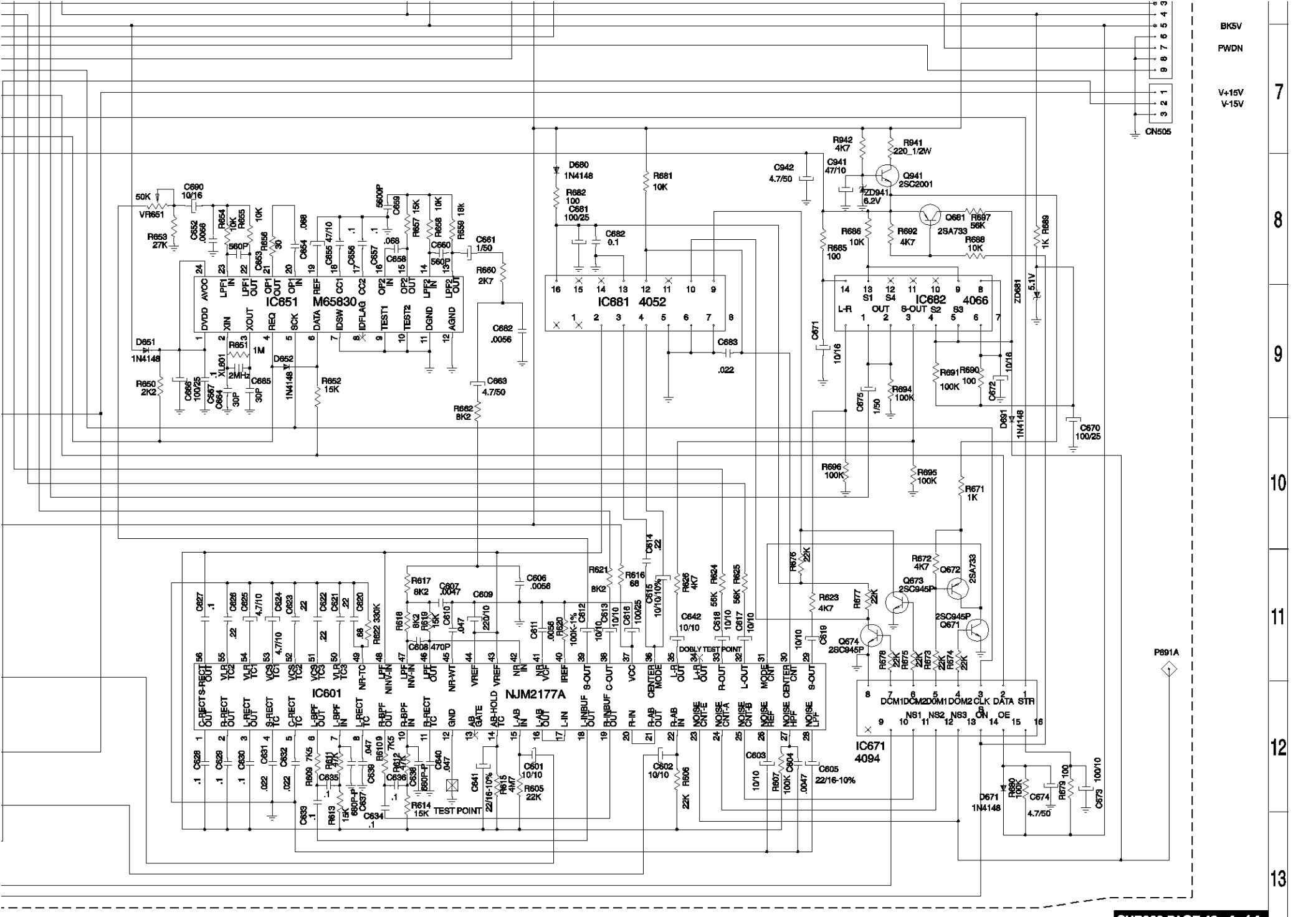


00 SCHEMATIC DIAGRAM 2





SUB300 PAGE 40 - 3 of 4


BK5V
PWDN
V+15V
V-15V
CN505
IC651 M65830
IC681 4052
IC682 4066
IC601 NJM2177A
IC671 4094
Q941 2SC2001
ZD941 6.2V
Q681 2SA733
Q672 2SA733
Q673 2SC945P
Q674 2SC945P
2SC945P Q671
D680 1N4148
D651 1N4148
D652 1N4148
D691 1N4148
D671 1N4148
DOBLY TEST POINT
TEST POINT
P691A
DCM1 DCM2 DOM1 DOM2 CLK DATA STR
NS1 NS2 NS3 ON OE

SUB300B SCHEMATIC DIAGRAM 1

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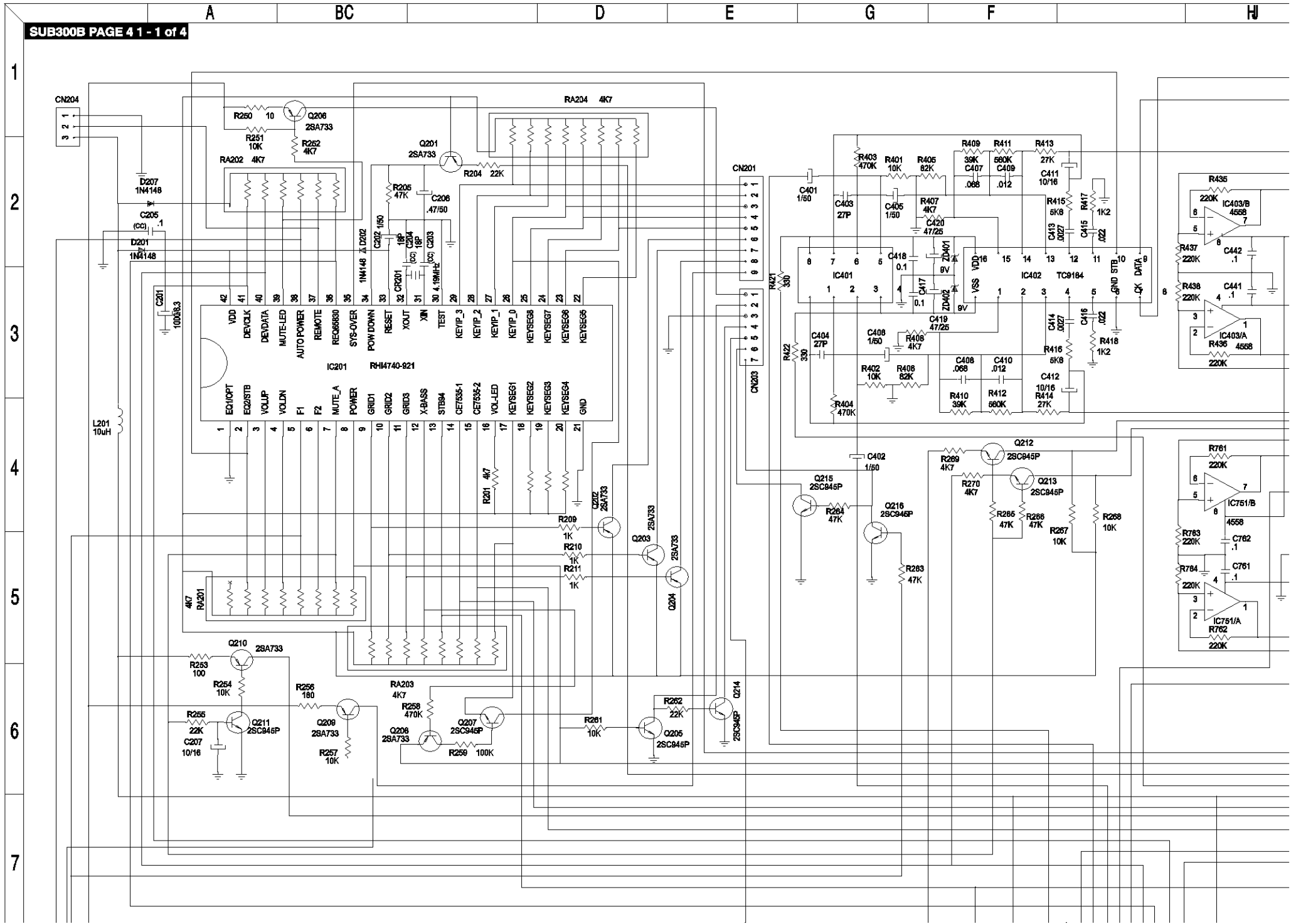
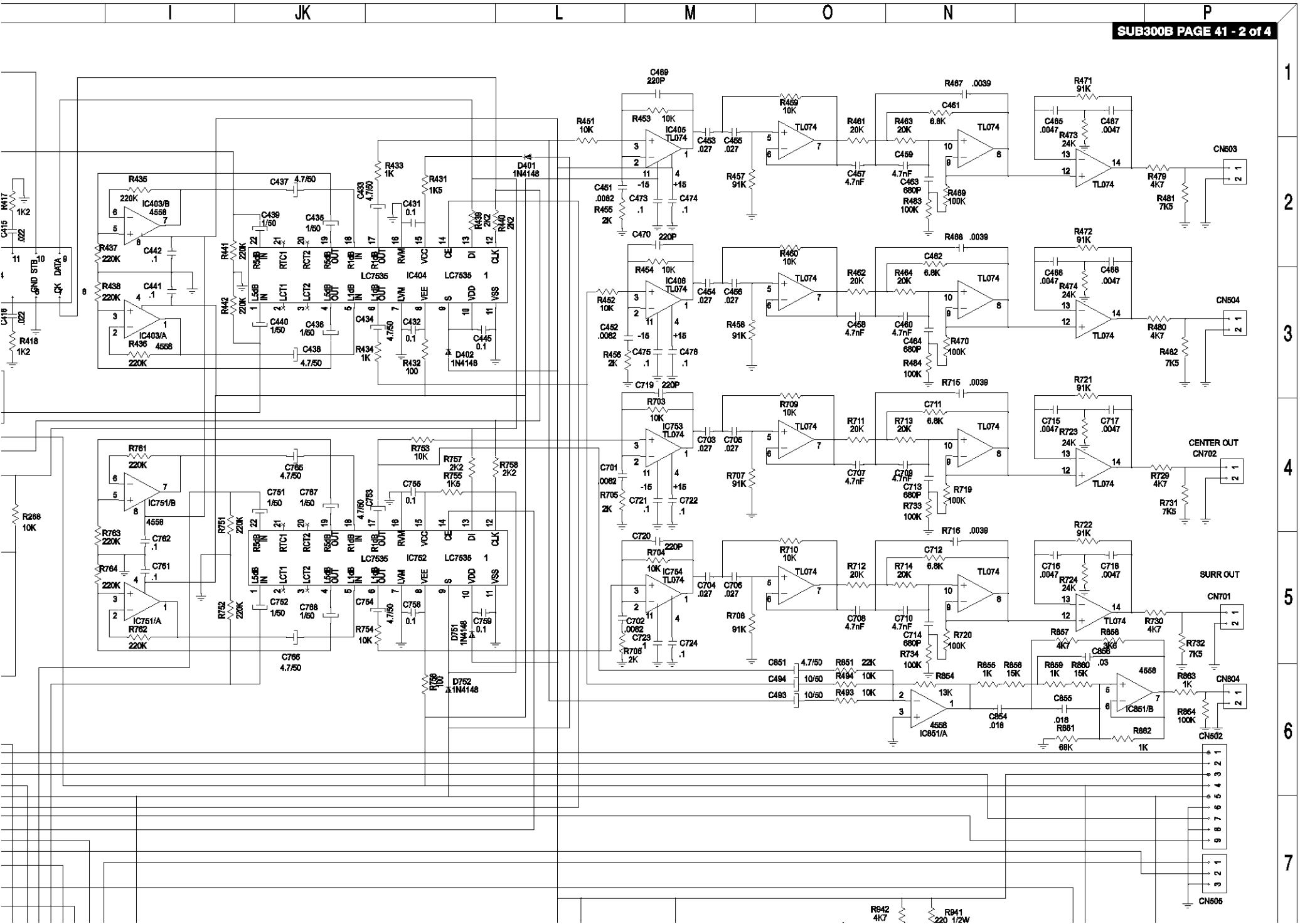
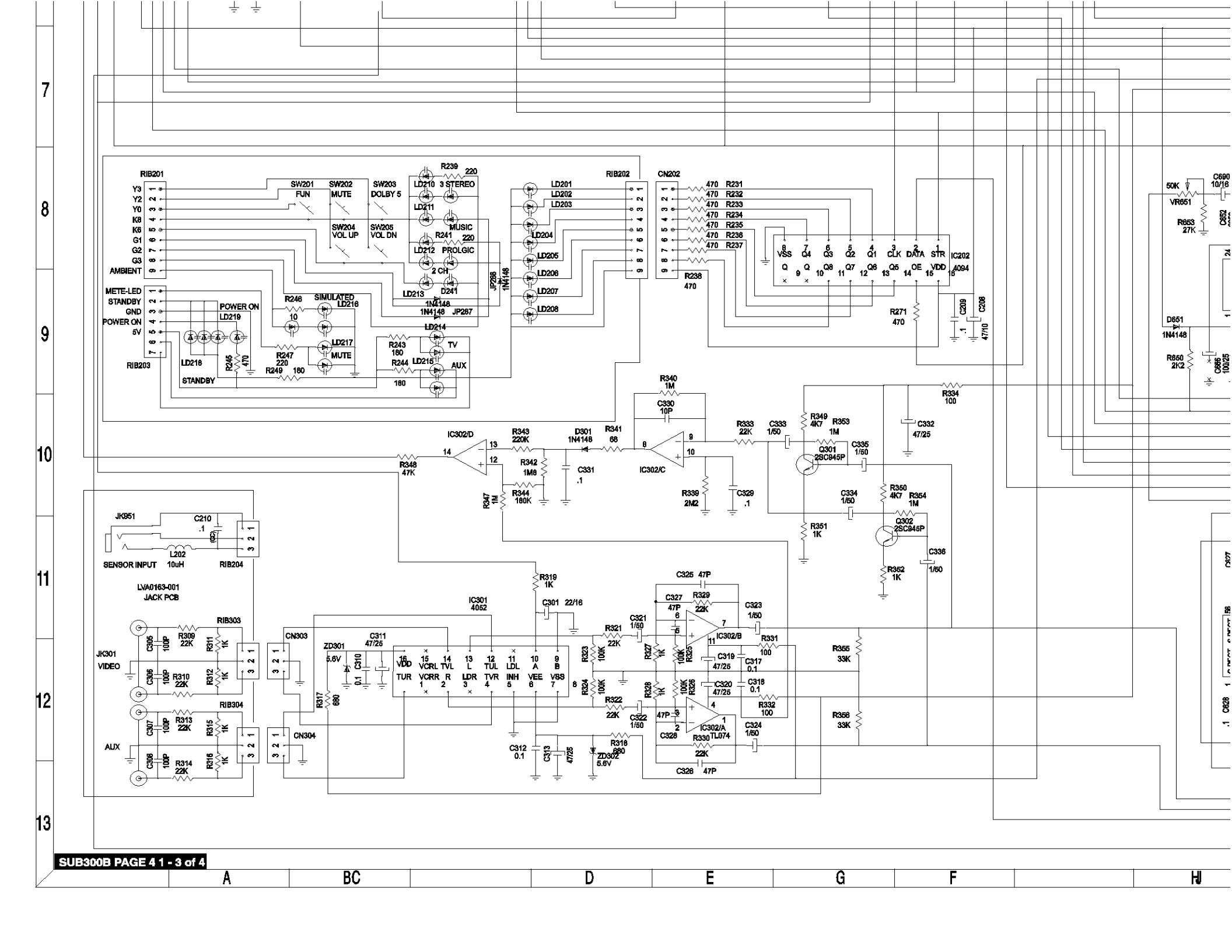
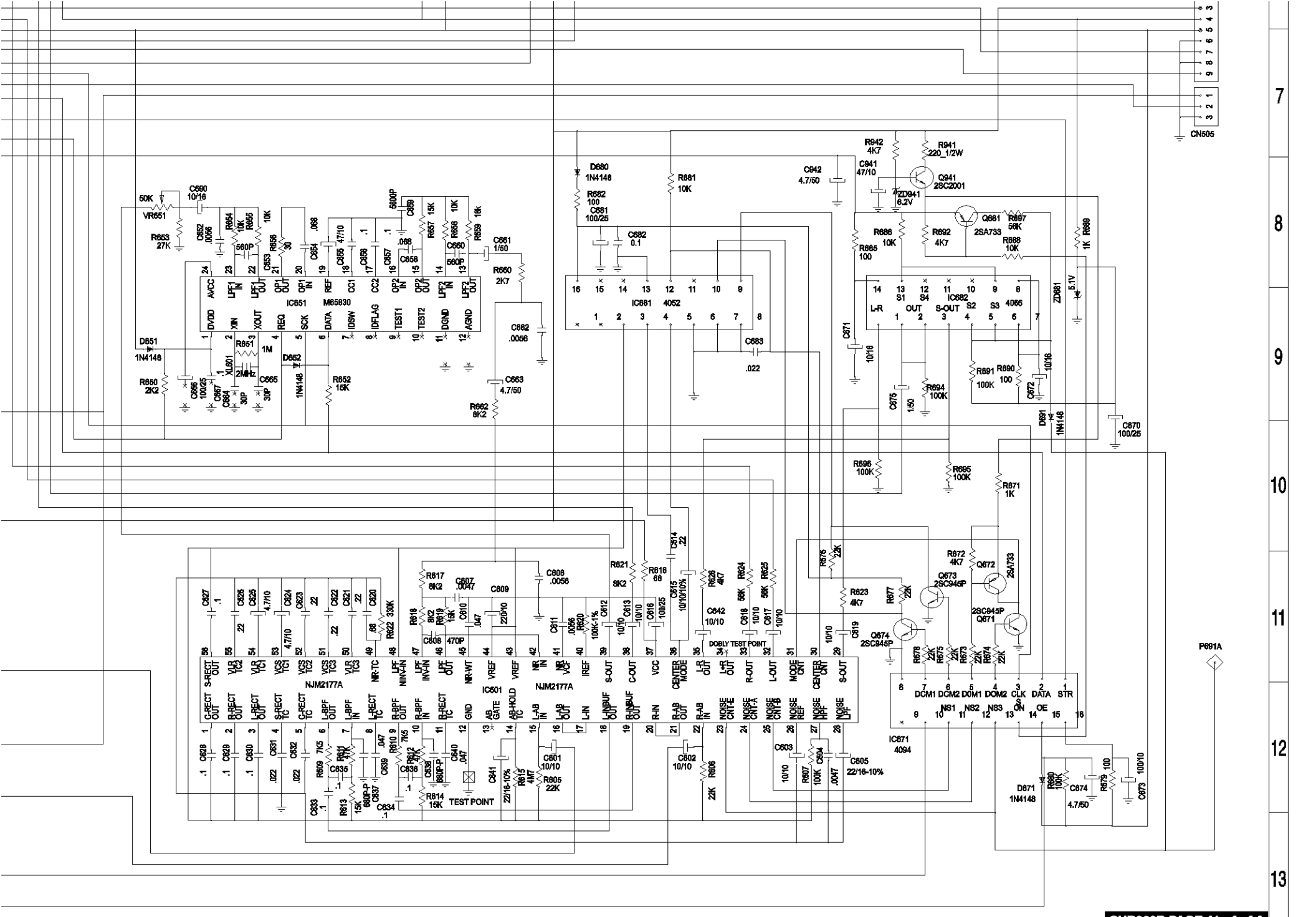

SUB300B PAGE 4 1 - 1 of 4
A
BC
D
E
G
F
HJ
1
2
3
4
5
6
7
CN204
D207 1N4148
C205 .1
D201 1N4148
C201 1000/6.3
L201 10uH
Q206 2SA733
R250 10
R251 10K
R252 4K7
RA202 4K7
Q201 2SA733
R204 22K
RA204 4K7
R205 47K
C206 .47/50
C202 1/50
C204 18P
C203 18P
CR201 4.19MHz
D202 1N4148
IC201 RHI4740-921
VDD DEVCLK DEVDATA MUTE-LED AUTO POWER REMOTE REQ65830 SYS-OVER POW DOWN RESET XOUT XIN TEST KEYIP_3 KEYIP_2 KEYIP_1 KEYIP_0 KEYSEG8 KEYSEG7 KEYSEG6 KEYSEG5
EQ1/OPT EQ2/STB VOLUP VOLDN F1 F2 MUTE_A POWER GRID1 GRID2 GRID3 X-BASS STB94 CET535-1 CET535-2 VOL-LED KEYSEG1 KEYSEG2 KEYSEG3 KEYSEG4 GND
R201 4K7
RA201 4K7
CN201
CN203
R421 330
R422 330
C401 1/50
C403 27P
C405 1/50
R403 470K
R401 10K
R405 82K
R407 4K7
C420 47/25
R409 39K
C407 .068
R411 560K
C409 .012
R413 27K
C411 10/16
R415 5K6
C419 .0027
R417 1K2
C415 .022
IC401
IC402 TC9184
ZD401 9V
ZD402 9V
C417 0.1
C418 0.1
C419 47/25
C404 27P
C406 1/50
R408 4K7
R402 10K
R406 82K
C408 .068
C410 .012
R410 39K
R412 560K
C414 .0027
C416 .022
R416 5K6
C412 10/16
R414 27K
R418 1K2
R404 470K
C402 1/50
Q215 2SC945P
Q216 2SC945P
R264 47K
R263 47K
Q212 2SC945P
Q213 2SC945P
R269 4K7
R270 4K7
R265 47K
R266 47K
R267 10K
R268 10K
R435 220K
IC403/B 4558
R437 220K
C442 .1
R438 220K
C441 .1
IC403/A 4558
R436 220K
R761 220K
IC751/B 4558
R763 220K
C762 .1
R764 220K
C761 .1
IC751/A 4558
R762 220K
Q202 2SA733
R209 1K
R210 1K
R211 1K
Q203 2SA733
Q204 2SA733
Q210 2SA733
R253 100
R254 10K
R255 22K
C207 10/16
Q211 2SC945P
R256 180
Q209 2SA733
R257 10K
RA203 4K7
R258 470K
Q206 2SA733
Q207 2SC945P
R259 100K
R261 10K
R262 22K
Q205 2SC945P
Q214 2SC945P

0B SCHEMATIC DIAGRAM 1




RIB201
SW201 FUN
SW202 MUTE
SW203 DOLBY 5
SW204 VOL UP
SW205 VOL DN
LD210 3 STEREO
LD211 MUSIC
LD212 PROLOGIC
LD213 2 CH
D241
R239 220
R241 220
JP288
1N4148
JP287
RIB202
CN202
R231 470
R232 470
R233 470
R234 470
R235 470
R236 470
R237 470
R238 470
IC202 4094
R271 470
C209 .1
C208 47/10
RIB203
METE-LED
STANDBY
GND
POWER ON
5V
POWER ON LD219
LD216 STANDBY
R245 470
R246 10
R247 220
R249 180
SIMULATED LD216
LD217 MUTE
LD214 TV
LD215 AUX
R243 180
R244 180
JK951
SENSOR INPUT
C210 .1
L202 10uH
RIB204
LVA0163-001
JACK PCB
JK301
VIDEO
AUX
RIB303
RIB304
CN303
CN304
IC301 4052
IC302/A TL074
IC302/B
IC302/C
IC302/D
ZD301 5.6V
ZD302 5.6V
R317 680
R318 680
R319 1K
C301 22/16
C310 0.1
C311 47/25
C312 0.1
C313 47/25
R321 22K
R322 22K
R323 100K
R324 100K
R325 100K
R326 100K
R327 1K
R328 1K
C321 1/50
C322 1/50
C323 1/50
C324 1/50
C325 47P
C326 47P
C327 47P
C328 47P
R329 22K
R330 22K
R331 100
R332 100
C317 0.1
C318 0.1
C319 47/25
C320 47/25
R355 33K
R356 33K
R340 1M
C330 10P
R341 68
D301 1N4148
R342 1M6
R343 220K
R344 180K
R347 1M
R348 47K
C331 .1
R333 22K
C333 1/50
R339 2M2
C329 .1
R349 4K7
R353 1M
Q301 2SC945P
C335 1/50
C332 47/25
R334 100
R350 4K7
R354 1M
Q302 2SC945P
C334 1/50
R351 1K
C336 1/50
R352 1K
VR651 50K
R653 27K
C690 10/16
D651 1N4148
R650 2K2
C666 100/25
SUB300B PAGE 4 1 - 3 of 4


IC851 M65830
IC601 NJM2177A
NJM2177A
IC681 4052
IC682 4066
IC871 4094
CN505
P691A
DOBLY TEST POINT
TEST POINT
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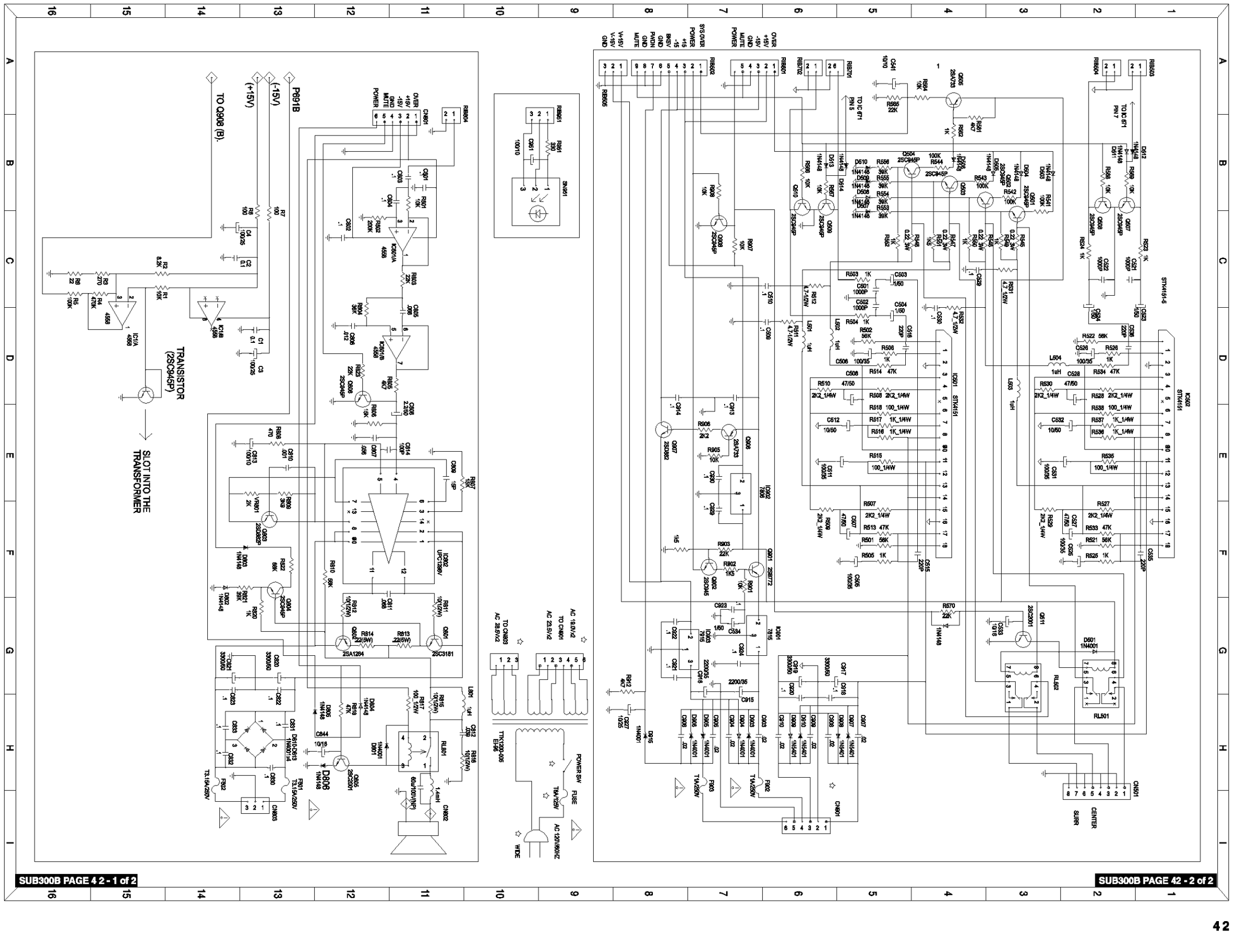
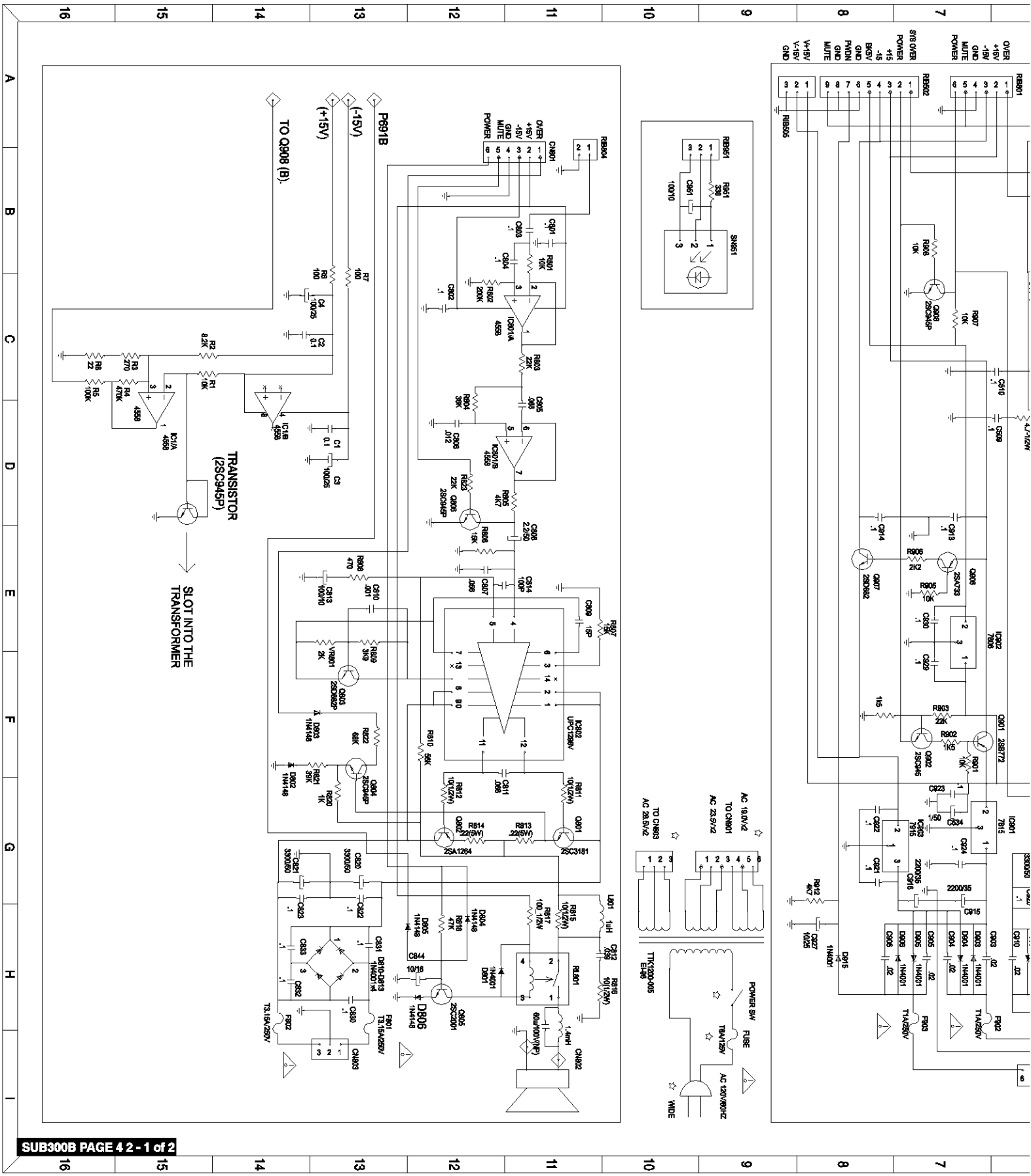
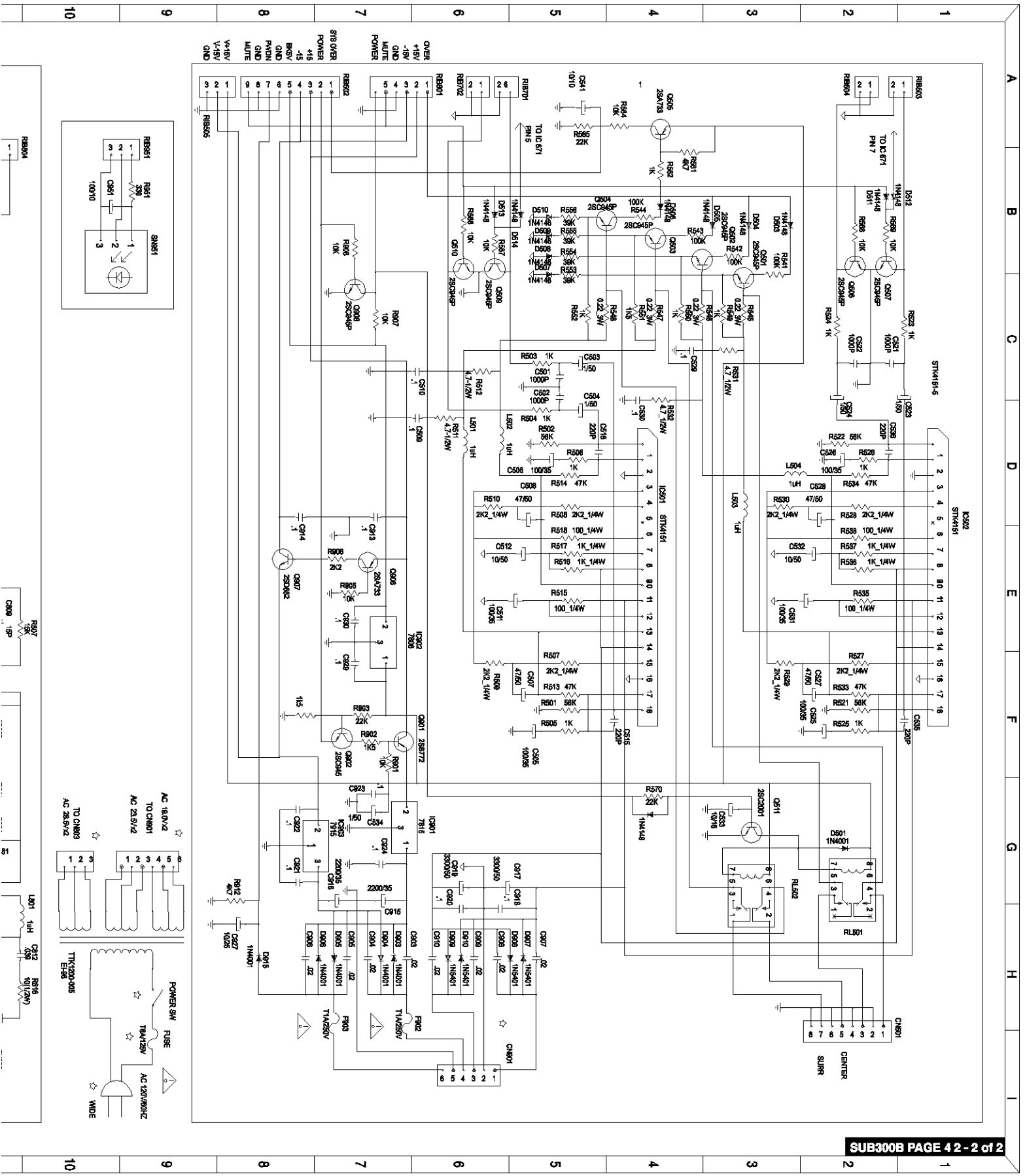
SUB300B SCHEMATIC DIAGRAM 2



SUB300B SCHEMATIC DIAGRAM 2



SUB300B SCHEMATIC DIAGRAM 2